

Fortunately, energy projects are so compelling that retailers have many opportunities to fund them using external sources of capital. The most promising external financing options for retail energy projects are described in this guide.

## ABOUT THE GUIDE

This guide is intended to help energy managers and finance professionals at retail companies understand how to use external financing for energy projects. An external financing mechanism exists for nearly any company's project and risk preferences. There is external financing for big and small projects, individual or portfolio-wide. There are financing mechanisms that are very safe but limit reward, and there are some that require more risk but offer greater potential value.

Facilities, operations, or sustainability managers who haven't ever utilized external financing should explore the viability of the mechanisms described in this guide to fund future energy projects.

### How to get started

1. RILA's [Energy Efficiency Finance Calculator](#) is the quickest way to understand available external financing options. Input basic project and company information and preferences to see what mechanisms you might want to consider.
2. In order to pinpoint the best option, consider whether the following characteristics of external financing are important to your company. Enlist the Finance Team as necessary to confirm any assumptions.

#### *Questions to Consider Before Pursuing External Financing*

- How involved would you like a third party energy management company to be? Would you like them to assume risk of project underperformance or manage project installation work, payments, permits, etc.?
  - Can your company take more debt on its balance sheet?
  - How much would your finance team value being able to get a low cost of capital for energy projects?
  - Is there a preference to get financing on a project by project basis, or to secure a larger amount to do a portfolio-wide project?
  - How would your company value positive press as a result of using an innovative financing option?
  - What are the primary reasons other projects might get prioritized over an energy project with more compelling financial returns? How does the company evaluate proposals against one another?
  - What are the key times of year to be aware of in the company's financial calendar?
  - Does the current project proposal process provide other teams with all of the information they want?
3. Review the primers in this document and the table in the addendum to narrow down your options before engaging your finance department about potential projects.

# TABLE OF CONTENTS

## Major Initiatives or Construction

<i>Green Bonds</i> .....	4
--------------------------	---

## Traditional Energy Efficiency Finance

<i>Energy Service Agreements</i> .....	8
<i>Managed Energy Service Agreements</i> .....	11
<i>Energy Performance Contracts</i> .....	14

## Specialized Financing

<i>Property Assessed Clean Energy</i> .....	18
<i>On-Bill Financing</i> .....	21
<i>Tax Increment Financing</i> .....	24

## Addendum

<i>Summary of Energy Efficiency Financing Options</i> .....	27
---	----

**For more information about the content in this Guide, contact the RILA/IMT team:**

*Erin Hiatt, Senior Manager, Sustainability & Compliance, RILA: [erin.hiatt@RILA.org](mailto:erin.hiatt@RILA.org)*

*Andrew Feierman, Senior Associate, IMT: [andrew.feierman@imt.org](mailto:andrew.feierman@imt.org)*



This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)



## MAJOR INITIATIVES OR CONSTRUCTION

Some financing mechanisms are only suitable for large projects or portfolio-wide initiatives. While many of the financing options presented in this guide can be used to support comprehensive projects at multiple sites or a single improvement across an entire portfolio, green bonds stand alone as the financing mechanism for raising large amounts of capital.

*Green Bonds.....4*



# GREEN BONDS

Prepared By:



Bonds are the largest source of capital in the global market. Many of the financiers and investors who offer bonds are interested in the environmental impact of the projects they fund. Green bonds provide a stable channel for investors to provide capital for projects that promote sustainability or mitigate climate change.

Bond labeling has been a popular tool since bonds were created. Labeled bonds have been used to fund the railroad, aircraft, highway, and war industries. Retailers are starting to take advantage of the benefits green bonds have to offer.

## Why should you use it?

- Your company wants to pursue high capital, portfolio-wide installations or retrofits through a single initiative or funding mechanism.
- Your company wants autonomy over spending and doesn't need third party project management.
- Your company wants to make a public splash and be viewed as environmental leaders.

[sustainability bond issuance](#). The company will use the net proceeds from the offering of \$500 million to enhance its sustainability programs around coffee supply chain management.

Other recent issuers have been [Regency Centers](#), [Vornado Realty](#), [Bank of America](#), [Solar City](#), and [Unilever](#).

## Who has used it in the past?

According to the [Climate Bonds Initiative](#), the global aggregate of green bond issuances increased from approximately \$11 billion in 2013 to \$41 billion in 2015. Corporations were the second largest issuer of green bonds (after development banks) in 2014, responsible for 33 percent of total issuances. In 2016, the green bond market is expected to top \$50 billion.

In February 2016 [Apple issued \\$1.5 billion in green bonds](#). They plan to use the proceeds to fund renewable energy projects, energy and water efficiency upgrades across its facilities, research and development into greener materials, and projects focused on recycling and materials recovery.

In May 2016, [Starbucks announced its first](#)

## What are the advantages?

- **Quantity** – a single green bond offering could fund almost any set of retrofits across an entire portfolio, or even fund new store construction.
- **Lower cost of capital compared to similar offerings** – Regency had no trouble attracting investor interest despite offering a bond yield 11 to 60 basis points lower than other similar REIT offerings. A 2015 Barclays report found green bonds priced at 20 basis points below non-green bonds.
- **Ease of qualifying** – the International Capital Market Association publishes official [Green Bonds Principles](#), and it is likely that any project with a notable sustainability component would qualify.
- **Positive press and improved company image** – Early adopters of green bonds have garnered substantial media interest.



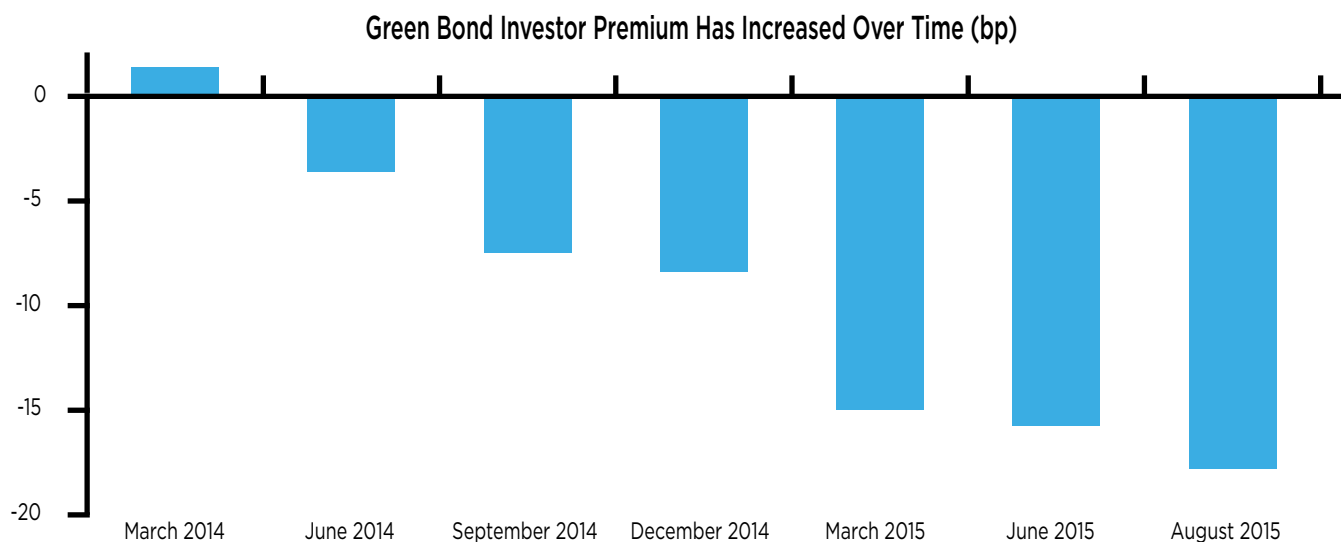
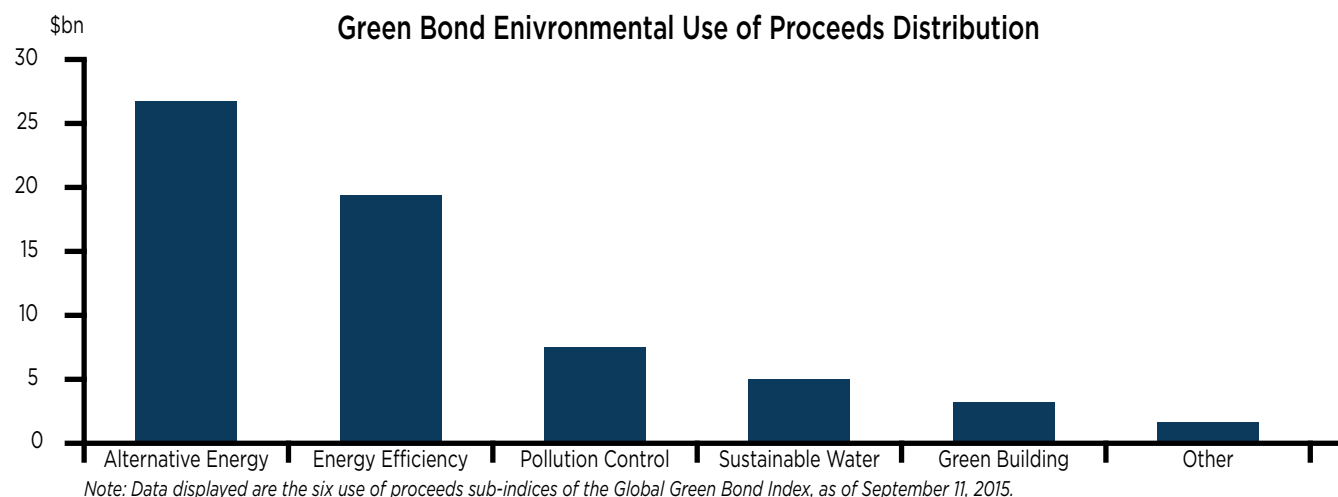
This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

## What are the downsides?

- Green bond issuances are typically large (\$5 million or greater).
- A high level of certainty in energy reductions is required to ensure bond obligations can be met via green projects.
- Using bonds proceeds for sustainability is unique; it might be an unfamiliar concept to pitch internally.

## Who should you talk to next?

- Talk to your internal finance team to learn about the company's history and comfort issuing bonds.
- Reach out to bond issuers and underwriters, as most are equipped to offer green bonds. If your company has previously issued bonds, standard channels to market should be sufficient.
- Refer to the [Climate Bond Initiative](#), which maintains a database of experienced green bond underwriters and third party verifiers.



Source: Barclays Research



## GREEN BONDS IN THE MARKET

Green bonds, a type of debt used to fund projects yielding environmental benefits, have grown in recent years. According to the [Climate Bonds Initiative](#), the global aggregate of green bond issuances increased from approximately \$11 billion in 2013 to \$41 billion in 2015. Corporations were the second largest issuer of green bonds (after development banks) in 2014, responsible for 33 percent of total issuances. In 2016, the green bond market is expected to top \$50 billion. Forecasts suggest the green bond market will grow to over \$1 trillion in annual issuances by 2020.

Green bonds are fixed income instruments with funds earmarked for projects that advance climate change mitigation, energy efficiency, and other areas of sustainability. They are attractive to investors that value protecting the environment as well as companies looking for a simple and stable source of capital.

In February 2016 [Apple issued \\$1.5 billion in green bonds](#). They plan to use the proceeds to fund renewable energy projects, energy and water efficiency upgrades across its facilities, research and development into greener materials, and projects focused on recycling and materials recovery. Goldman Sachs & Co., Bank of America Merrill Lynch, Deutsche Bank Securities, and J.P. Morgan are managing Apple's offering. Apple has committed to reporting about the allocations on an annual basis and has hired a third party verifier to conduct independent, annual updates about its progress.

In May 2016, [Starbucks announced its first](#)

[sustainability bond issuance](#). The company will use the net proceeds from the offering of \$500 million to enhance its sustainability programs around coffee supply chain management. This includes coffee purchases from suppliers verified by a third-party as complying with their ethical sourcing verification program, the development and operation of farmer support centers in coffee growing regions, as well as short and long term loans. Starbucks will publish annual updates of the allocation of the proceeds throughout the term of the bond until the proceeds have been fully allocated.

Real estate companies in the U.S. have added to the recent surge of green bond offerings. In 2014, Regency Centers issued a 10-year, \$250 million corporate green bond, at an interest rate of 3.75 percent. As of March 2015, [Regency had allocated the entire green bond proceeds to 9 shopping centers](#) that either received or were in the process of receiving a LEED certification.

For a retailer, the familiar structure of a bond offering combined with innovative green labeling make green bonds a great way to raise capital for energy projects at favorable rates while attracting positive press for your company. Green bond proceeds can be used to advance energy and sustainability goals in retail stores, warehouses, distribution centers, and corporate offices.

Companies interested in using green bonds should refer to GRESB's [Green Bond Guidelines for the Real Estate Sector](#) and the International Capital Market Association's (ICMA) [Green Bond Principles](#).

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.*

*This resource was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*

## TRADITIONAL ENERGY EFFICIENCY FINANCE

There are many Energy Service Companies (ESCOs) actively trying to bring their cash and expertise to an untapped retail market. As ESCOs work to break into this new market, the types of financing they offer tends to have shorter contract terms and more flexibility. Newer energy service contracts can be customized according to the needs of a particular company with no upfront cost.

<i>Energy Service Agreement.....</i>	<b>8</b>
<i>Managed Energy Service Agreement.....</i>	<b>11</b>
<i>Energy Performance Contracts.....</i>	<b>14</b>





Prepared By:



# ENERGY SERVICE AGREEMENTS (ESAs)

An Energy Service Agreement (ESA) is a pay-for-performance, off-balance sheet financing solution that allows customers to implement energy efficiency projects with zero upfront capital expenditure. Through the ESA, the ESA provider pays for all project development and construction costs. Once a project is operational, the customer makes service charge payments for actual realized savings. The price per unit of savings is a fixed output-based charge that is set at or below a customer's existing utility price, resulting in immediate reduced operating expenses.

ESAs offer promise for retail energy retrofits because they limit risk while still providing an avenue for short-term energy and cost savings.

## Why should you use it?

- Your company wants to pursue portfolio wide installations or retrofits, but does not have cash for capital investments.
- Your company is risk adverse and wants a third-party to take on underperformance risk and provide project management.
- Your company is looking for a financing mechanism with a contract term as short as 5 years and the option to buy out annually.

annually. This project is the first in a planned, multi-site ESA program that will include a diverse mix of site-specific, efficiency technologies and upgrades.

Companies like [Metrus Energy](#), [SClenergy](#), and [Siemens](#) offer ESAs and they report working with Big Lots, DSW, Big 5 Sporting Goods, 99 Cents Only Stores, BAE Systems, Hyatt Hotels, and other Fortune 500 companies.

## Who has used it in the past?

The ESA is a proven structure that has been utilized to implement [numerous multi-million dollar retrofit projects at Fortune 500 and major institutional facilities](#). Overall, more than one hundred projects have been completed using the ESA structure. Although retailers are just beginning to explore the option, many other corporations have already taken advantage of the benefits an ESA can offer.

Construction is currently underway for a [\\$4.2 million efficiency project at a Fortune 500 manufacturing facility](#) financed under Metrus Energy's ESA. This retrofit includes lighting, variable frequency drives and controls that will yield \$550,000 in savings

## What are the advantages?

- **Avoided Capital Outlay** – ESA provider pays for all upfront project costs, enabling customers to conserve capital funds for investment in their core business.
- **ESA Payments Treated as an Operating Expense** – The ESA is designed to be an off-balance sheet financing solution with regular payments that are similar to a standard energy utility bill or PPA.
- **Energy Savings Pay for Projects** – The ESA enables customers to redirect a portion of their current utility spending to pay for efficiency improvements; ESA payments are based on realized energy and operational savings.



This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

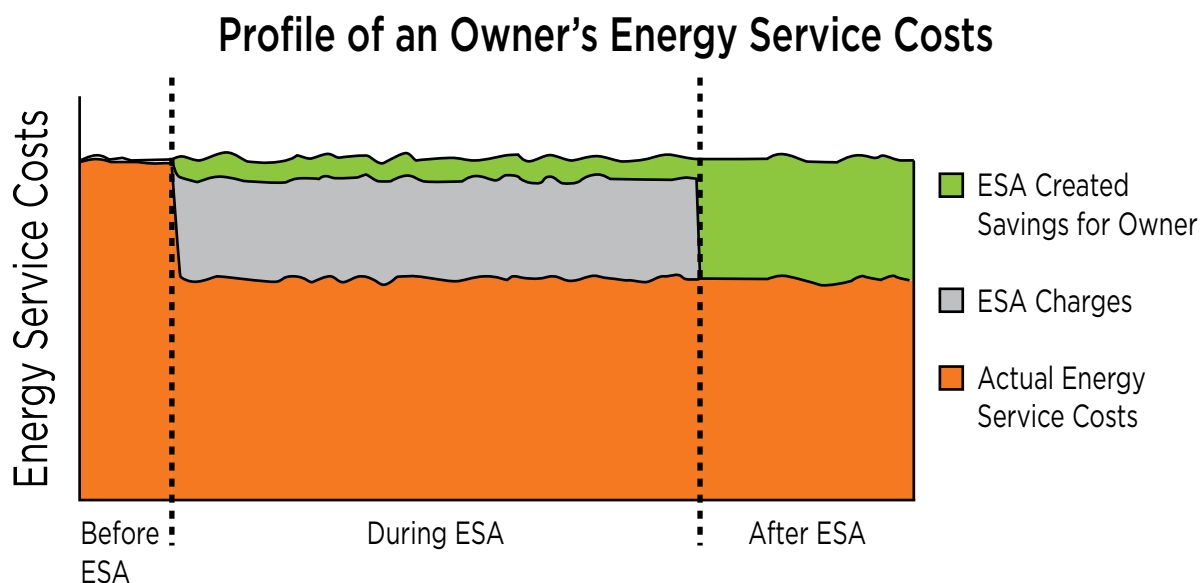
- **Reduced Operating Costs** – ESA payments are set below the current utility price.
- **Enhanced Reliability of Operations** – ESA providers pay for periodic maintenance services to ensure long-term reliability and performance of the project equipment.
- **Flexible & Scalable Financing** – Under an ESA, as new opportunities for savings are identified they can be funded as they emerge, and rolled out to additional buildings across facilities. ESA providers can bundle together multiple sites that have smaller sized project opportunities (\$500,000 or less) into a single ESA financing package (e.g., bundle 10 sites with \$500,000 projects into a single \$5 million ESA).

### What are the downsides?

- Providers tend to look for larger project sizes (\$1 million and above).
- ESAs are only viable in leased space when the contract term matches the lease term.
- Transaction costs can be high if each deal is heavily negotiated; typical deals have a negotiation period of 9-24 months.

### Who should you talk to next?

- Talk to your internal finance team to learn about the company's history and comfort working with energy service providers.
- Reach out to energy service providers like [Metrus Energy](#), [SClenergy](#), and [Siemens](#) to learn more about how an ESA can help you meet your project goals.



Source: Associated Renewable

## ESAs IN THE MARKET

In an Energy Service Agreement (ESA), a single provider develops, finances, and owns energy efficiency measures and equipment installed in a customer's facilities during a contracted period (typically 5-15 years). An ESA customer enjoys lower utility bills throughout the contract term, but does not own installed equipment unless they buy out the contract or purchase the equipment at fair market value at the end of the ESA contract.

An ESA can be thought of as an energy efficiency version of a Power Purchase Agreement (PPA) commonly used to finance the installation of renewable energy systems.

The customer does not take project performance risk since they only pay for savings actually achieved. Instead, the ESA provider takes the project performance risk and gets paid less if the project savings are less than expected.

A Fortune 50 company in the Midwest used an ESA to make [\\$3.1 million worth of efficiency upgrades](#). The ESA provider, Metrus Energy, partnered with Siemens Industry, Inc. and Bank of America Merrill Lynch on the project. Benefits to the customer included no cost for the efficiency upgrades, annual cash savings, equipment resiliency, and a reduced carbon footprint. Construction was completed in April of 2015 and is producing \$500,000 in savings annually, which yields a simple payback period of 6.2 years. Annual energy savings due to lighting

upgrades, building automation system and controls, chiller replacement, and demand control ventilation, total more than 3.8 million kWh and 31,000 therms of natural gas annually. Further, the energy savings result in avoided emissions of 3,615 tons of carbon dioxide, which is equivalent to eliminating the electricity use of 500 homes each year and removing 760 vehicles from the road annually.

BAE Systems, an international global aerospace company and client of Metrus Energy, has incorporated ESAs into its overall energy reduction plan. Thus far, [BAE has used ESAs in five of its buildings](#) totaling \$10 million worth of efficiency improvements. As of February 2016, BAE has saved a total of \$4.1 million, equivalent to \$1.65 million annually. This project is a good example of the scalability of an ESA as BAE's projects are operational in three states.

Generally, an ESA is an effective tool for retailers looking to stabilize utility costs and make progress on their corporate social responsibility goals without making a large capital outlay. While ESAs offer long-term benefits due to the ability to buy out the contract and take ownership of installed equipment, their primary benefit is the flexible nature of the contract structure. An ESA would allow retailers to reduce energy consumption in stores, warehouses, distribution centers, and corporate offices with minimal management and little to no upfront costs.

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.*

*This resource was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*



# MANAGED ENERGY SERVICE AGREEMENTS (MESAs)

Prepared By:



A Managed Energy Service Agreement (MESA) is a variation of an Energy Service Agreement (ESA). In an ESA, the provider develops, finances, owns, operates, and maintains all energy efficiency measures and equipment installed during the term of the project. A MESA differs from an ESA because the provider also assumes the broader energy management of a client's facility, including the responsibility for utility bills, in exchange for a series of payments based on the customer's historic energy use.

MESAs offer promise for retail energy retrofits when the customer is financially stable, but lacks the expertise or time to undertake the energy efficiency retrofit.

## Why should you use it?

- Your company wants to pursue portfolio wide installations or retrofits, but does not have cash for additional capital investments.
- Your company is risk adverse and wants a third-party to take on underperformance risk and provide project management.
- Your company is interested in having a third-party manage your facility to ensure that it is operating as efficiently as possible during the contract term.

## Who has used it in the past?

Although MESA is a relatively new market tool that retailers are just beginning to explore, there has been initial uptake in the commercial and higher education sectors.

In 2006, [Corporate Office Properties Trust](#), a REIT based in Maryland, used a MESA to upgrade five buildings. In year one, they averaged over 26% energy savings and by year five, they averaged over 30% energy savings annually.

[Drexel University](#) used a MESA to reduce energy consumption by more than 25% in 430,000 square feet of building space. Conservation measures

included demand controlled ventilation systems, replacement of the central air chiller, variable air volume units, cooling towers, and lighting controls.

Companies like [SClenergy](#) and [Metrus Energy](#) offer MESAs and they report working with BAE Systems, Hyatt Hotels, and other Fortune 500 companies.

## What are the advantages?

- **Avoided Capital Outlay** – MESA provider pays for all upfront project costs, enabling customers to conserve capital funds for investment in their core business.
- **MESA Payments Treated as an Operating Expense** – The MESA is designed to be an off-balance sheet financing solution.
- **Enhanced Reliability of Operations** – MESA providers pay for periodic maintenance services to ensure long-term reliability and performance of the project equipment. Customer has a single point of contact and a single payment for all utility expenses and the MESA provider actively manages energy consumption at the facility.
- **Energy Savings Pay for Projects** – The MESA enables customers to redirect a portion of their



This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

current utility spending to pay for efficiency improvements; MESA payments are based on realized energy and operational savings.

- **Flexible & Scalable Financing** – Under a MESA, as new opportunities for savings are identified they can be funded as they emerge, and rolled out to additional buildings across facilities. MESA providers can bundle together multiple sites that have smaller sized project opportunities (\$500,000 or less) into a single MESA financing package (e.g., bundle 10 sites with \$500,000 projects into a single \$5 million MESA).

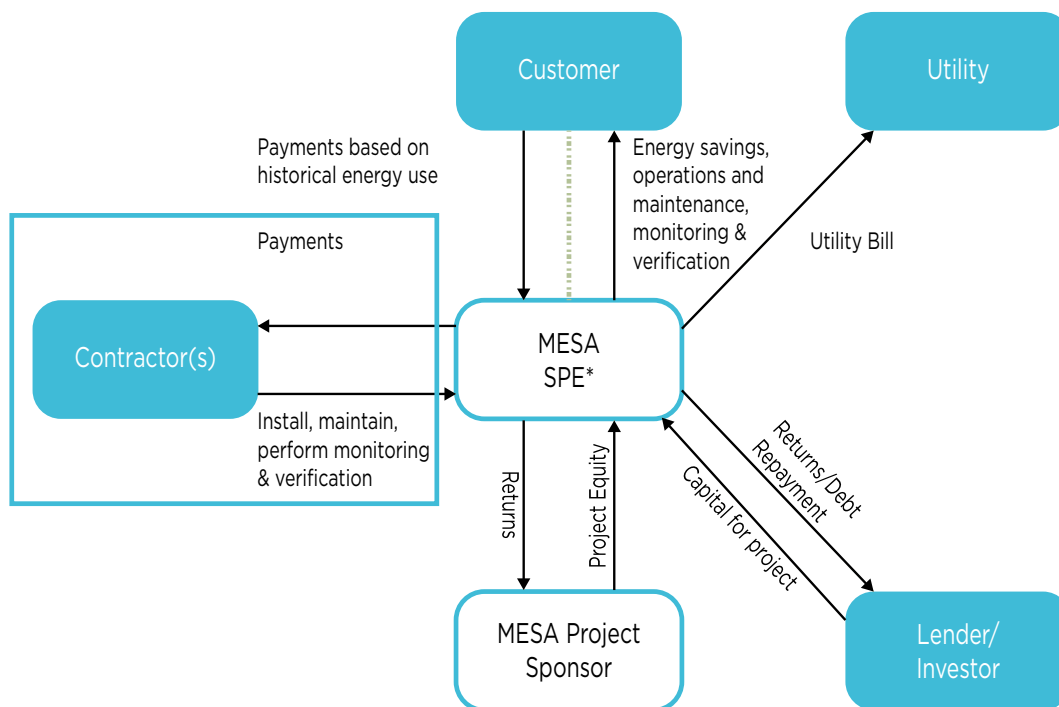
### What are the downsides?

- MESAs are typically reserved for larger projects (\$500,000 and above).
- MESAs are only viable in leased space when the contract term matches the lease term.
- Transaction costs can be high if each deal is heavily negotiated; typical deals have a negotiation period of 9-24 months.

### Who should you talk to next?

- Talk to your internal finance team to learn about the company's history and comfort working with energy service providers.
- Reach out to energy service providers like [SClenergy](#) and [Metrus Energy](#) to learn more about how a MESA can help you meet your project goals.

### Basic MESA Structure



Source: Wilson Sonsini Goodrich & Rosati, *Innovations and Opportunities in Energy Efficiency Finance*, Third Edition, May 2013  
\*SPE stands for Special Purpose Entity, which is typically the established entity that owns the installed equipment.

## MESAs IN THE MARKET

Managed Energy Service Agreements (MESAs) are contracts under which a third-party energy efficiency contractor assumes the energy management of a client's facility, including the installation of energy efficiency upgrades and responsibility for utility bills, in exchange for a series of payments based on the customer's historic energy use. MESAs offer a turn-key energy retrofit and financing approach that limits upfront costs and management burden.

The MESA contract in effect caps the customer's utility payments, while the contractor reaps all or part of the energy savings over the contract term. A MESA customer enjoys lower utility bills throughout the contract term, but does not own installed equipment unless they buy out the contract or purchase the equipment at fair market value at the end of the MESA contract.

More recently, the commercial sector has taken notice of the benefits that MESA provides and several deals have been executed. [Corporate Offices Property Trust](#), a public REIT, utilized [SCLenergy's MESA Capital product](#) to retrofit five of its buildings in 2006. High efficiency lighting and HVAC systems coupled with digital controls on various systems, accounted for the majority of energy savings. In total, 479,420 square feet of space was made more efficient and by 2010, the energy savings were greater than the annual projected average of 30.8%.

[Drexel University also worked with SCLenergy](#) to fund \$6.5 million worth of improvements in several facilities on campus. The overall reduction in energy consumption is expected to be more than 25% and will account for over 430,000 square feet of building space. The project includes installation of new control systems in 62 laboratories in three different buildings, which will save over 46% of the energy used to operate the lab spaces. Mechanical upgrades in another building include a new chiller, among other things, that will reduce the HVAC load by 35% resulting in \$200,000 of savings per year.

While MESAs typically have long negotiation periods, they afford retailers flexibility with regard to site location, building type, and scalability. A MESA can be executed regardless of whether space is leased or owned, provided that the customer pays for their own utility consumption. In addition to improving the energy efficiency of retail stores, MESAs can also address the needs of warehouses, distribution centers, and corporate offices. A single MESA contract can be structured to span multiple locations, cover numerous facility types, and be executed in phases, allowing a customer to pilot a project before scaling it across their portfolio. Although the retail sector has not yet tested MESA as a viable external financing option, its spread into commercial real estate lays the foundation for uptake by retailers.

---

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.*

*This resource was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*



# ENERGY PERFORMANCE CONTRACTS (EPCs)

Prepared By:



An Energy Performance Contract (EPC) is a financing mechanism executed by Energy Service Companies (ESCOs) who coordinate the installation of new equipment and split the value of energy savings with the customer throughout a contract term. The energy efficiency improvements are owned by the customer and may be installed with little or no up-front cost.

EPCs are one of the most successful and long-standing financing mechanisms specifically for energy efficiency. Although most EPCs to date have been used to fund government efficiency projects, they have also worked effectively for the private sector.

## Why should you use it?

- Your company wants to invest in its facilities for the long-term (10-20 years).
- Your project consists of many energy conservation measures and you need third-party project management and expertise.
- Your company is pursuing a large installation or retrofit in one or more of your facilities, but you need upfront capital and an energy savings guarantee to move forward.

## Who has used it in the past?

The federal government has utilized EPCs for over 20 years, [investing more than \\$3.49 billion](#) in federal energy efficiency and renewable energy improvements. These improvements are generating more than 402 trillion Btu in life-cycle energy savings and more than \$8.71 billion of cumulative energy cost savings for the federal government.

According to National Renewable Energy Laboratory, [the ESCO industry secured only 8%](#) of its revenues from commercial and industrial clients in 2011, but today there is more attention on this segment of the market.

[Simon Property Group](#) has utilized EPCs to lower energy consumption and associated costs in some of its properties by working with [Ameresco](#). To date Simon and Ameresco have implemented more than \$20 million in efficiency measures and capital improvements at 42 properties throughout the United States, including Puerto Rico.

Some of the major ESCOs that offer EPCs are [Schneider Electric](#), [Constellation Energy](#), [NORESO](#), [Ameresco](#), [Siemens](#), and [Johnson Controls](#). They report having worked with companies like Simon Property Group, BMW, Alcoa, General Motors, and others.

## What are the advantages?

- **Avoided Capital Outlay** – There are little to no upfront costs.
- **Energy Savings Guaranteed** – Performance guarantees reduce project risks, which is valuable in large, complex retrofits.
- **Enhanced Reliability of Operations** – Projects are maintained through rigorous monitoring and verification by the company issuing the performance contract.



This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

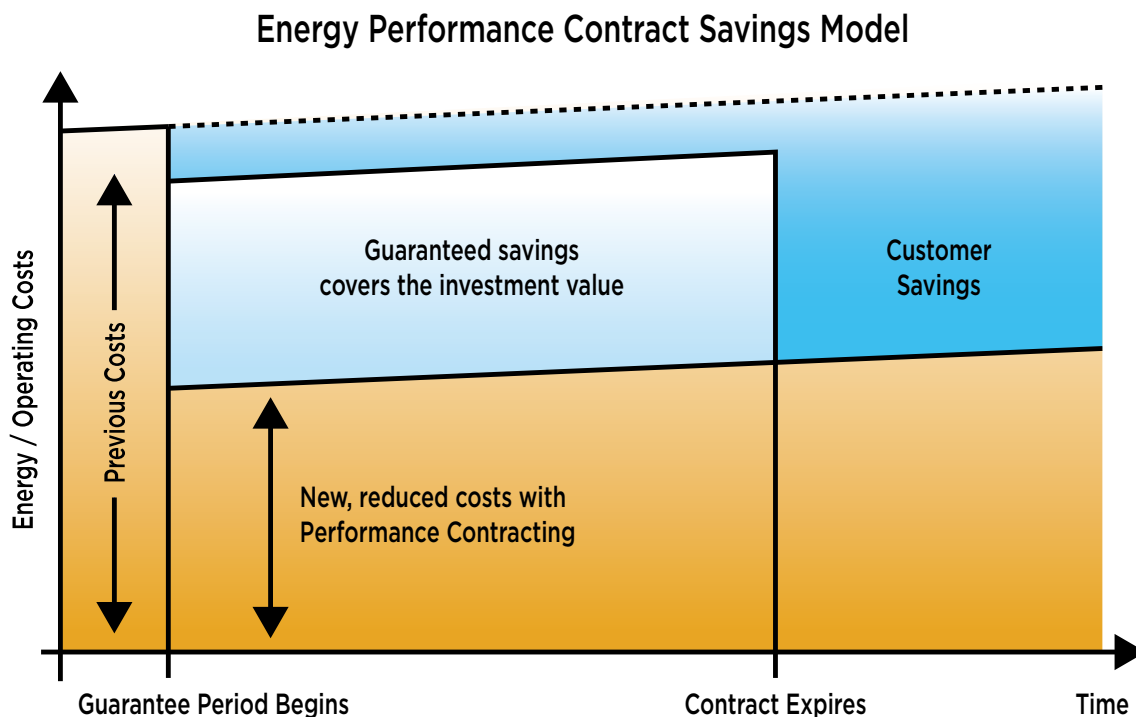
- **Standardized Process** – ESCOs have a long history of contracting experience and standardized processes.
- **Flexible & Scalable Financing** – Most EPCs use Tax-Exempt Lease-Purchase Agreements, which is an effective alternative to traditional debt financing. It allows organizations to pay for energy upgrades by using money that is already set aside in its annual utility budget. EPCs can also be used for portfolio-wide initiatives.

### What are the downsides?

- EPCs can have high transaction costs and long negotiation periods (typically over a year).
- EPCs are not viable in leased spaces unless the lease term matches the contract term (average contract term is 17 years).
- EPCs will most likely be on-balance sheet.
- Providers tend to look for larger project sizes (\$1 million and above).

### Who should you talk to next?

- Talk to your internal finance team to learn about the company's history and comfort working with energy service providers.
- Reach out to energy service providers like [Schneider Electric](#) and [Ameresco](#) to learn more about how an EPC can help you meet your project goals.



Source: Codema

## EPCs IN THE MARKET

In an Energy Performance Contract (EPC), energy efficiency improvements are owned by the customer and may be installed with little or no up-front cost. Typically, an Energy Service Company (ESCO) will play multiple roles, from originator and developer to the arranger of the financing. For very large retrofit projects this level of centralized coordination and project management can be extremely useful. After project construction and implementation is complete, the ESCO monitors the savings and may also provide service upgrades for a period of time.

EPCs are typically designed so that the value of energy savings is split between the customer and the ESCO throughout the contract term, such that the customer's total savings exceed all of their payments over the 10-20 year contract term. After the EPC term, payments to the ESCO cease and the customer operates and maintains the energy efficiency improvements and retains all energy savings. In many cases, an ESCO will guarantee a certain level of energy savings to the customer. If the guaranteed level of energy savings is not delivered, the ESCO will have to pay the difference between the guaranteed and the actual level of savings. An energy savings guarantee from a creditworthy ESCO can improve the finance ability of the EPC if the customer is securing financing.

[Simon Property Group has utilized EPCs](#) to lower energy consumption and associated costs in some of its properties by working with [Ameresco](#).

Simon targeted several of its shopping malls where upgrades included lighting and energy management systems to provide increased control of equipment, such as chillers, air handlers, and common-area lighting panels. In addition to energy efficiency, Simon was also able to address water efficiency with variable and/or low flow technology. To date Simon and Ameresco have implemented more than \$20 million in efficiency measures and capital improvements at 42 properties throughout the United States, including Puerto Rico.

General Motors (GM) began using EPCs in their facilities in 2012. Since then, [GM has executed projects totaling more than \\$40 million](#) in ESCO investment, resulting in immediate energy and operational savings to the company. Even after making payments to the ESCO, GM has been cash ahead from day one with no financial investment whatsoever. Over the past several years GM has doubled the amount of money directed towards energy conservation, from \$40 million to \$80 million, using EPC methods. EPCs have resulted in a reduction of an additional 120,000 megawatt hours of annual energy consumption.

In sum, EPCs are ideal for retailers that hold or lease facilities long-term (20 years or more). Although an EPC may not be the best option for retail stores, it could be a viable option to address the efficiency needs of warehouses, distribution centers, and corporate offices.

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.*

*This resource was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*



## SPECIALIZED FINANCING

Specialized financing options offer strong returns and are either enabled through legislation or local utility providers. When a city, state, or public utility leverages their bonding authority to make specific financing available for companies, the cost of capital is almost always lower than it would be in an unregulated market.

Legislatively authorized finance programs take many forms, and can fund both large and small projects. Relatively new specialized lending mechanisms, like Property Assessed Clean Energy (PACE) and On-Bill Financing (OBF), are beginning to scale across jurisdictions, making these benefits available in facilities across the country.

<i>Property Assessed Clean Energy</i> .....	<b>18</b>
<i>On-Bill Financing</i> .....	<b>21</b>
<i>Tax Incremental Financing</i> .....	<b>24</b>



# PROPERTY ASSESSED CLEAN ENERGY (PACE)

Prepared By:



Property Assessed Clean Energy (PACE) financing is a structure in which building owners take on debt for energy efficiency or renewable energy improvements that is repaid through an assessment on their property tax bill. The stability of the property tax bill allows building owners to make long-term investments in their buildings without being responsible for the outstanding debt if a building is sold. PACE is becoming a better-known financing mechanism for energy efficiency and renewable energy and has financed 750 commercial projects to date including upgrades valued at \$250 million.

The retail sector has invested approximately \$45.7 million using this model to date and represents the most frequent property type to use PACE financing. There is potential for PACE to grow in the retail sector, particularly as more states adopt enabling legislation.

## Why should you use it?

- Your company owns stores, warehouses, distribution centers, and corporate offices and wants to make energy efficiency improvements, but you have limited access to capital.
- Your company prefers to pilot a project at a few locations before implementing more broadly.
- Your company does not hold its facilities long-term and wants to ensure that it can transfer obligations at the time of sale.

## Who has used it in the past?

The retail sector has invested approximately [\\$45.7 million using this model to date, and represents the most frequent property type to use PACE financing.](#)

Since 2014, BrandsMart, a retailer based in Florida, has [successfully arranged PACE deals in three of its stores.](#) The deals ranged in size from \$1.8 million to \$3.1 million. At one location, BrandsMart is expecting to save 34% on its annual utility costs.

[The largest PACE project to date worth \\$8.4 million](#) was completed by [CleanFund Commercial Pace Capital Inc.](#) in December 2015. The \$8.4 million enabled State House Square, a Class A office building in Hartford, CT, to significantly lower its energy and operating costs.

While more established programs like [Sonoma County's Energy Independence Program](#) or [Connecticut's CPACE Program](#) have financed millions of dollars of improvements, many others are still developing. PACE legislation for commercial properties has been [adopted in 30 states and the District of Columbia.](#)

## What are the advantages?

- **Avoided Capital Outlay** – 100% financing with no upfront costs for the property owner (includes hard and soft costs).
- **Positive Cash Flow** – Positive cash flow and increased property value, even with long simple payback projects.
- **Transferability** – PACE assessments are linked to the property and automatically transfer to a new owner upon the sale of the property.
- **Favorable Terms** – Allows lenders the ability to offer better interest rates and longer repayment terms (up to 25 years) than is otherwise available. As PACE financing is repaid on the property tax bill, it offers strong security, which enables deeper energy efficiency and greater savings for projects.



This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

- **Flexible Balance Sheet Treatment** – PACE may be structured to be off-balance sheet or on-balance sheet.

### What are the downsides?

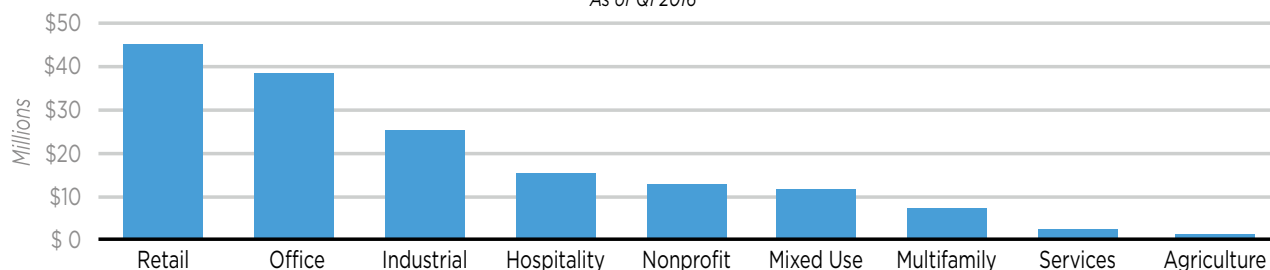
- PACE is best suited for building owners and mortgage holder approval is required.
- PACE is limited to jurisdictions with legislative PACE districts (currently more than [1,000 municipalities across the country](#)).
- PACE deals must be structured for individual properties, therefore it is necessary to go through a specialized lender to use PACE for large initiatives.
- There are legal and administrative expenses associated with the PACE financing process.

### Who should you talk to next?

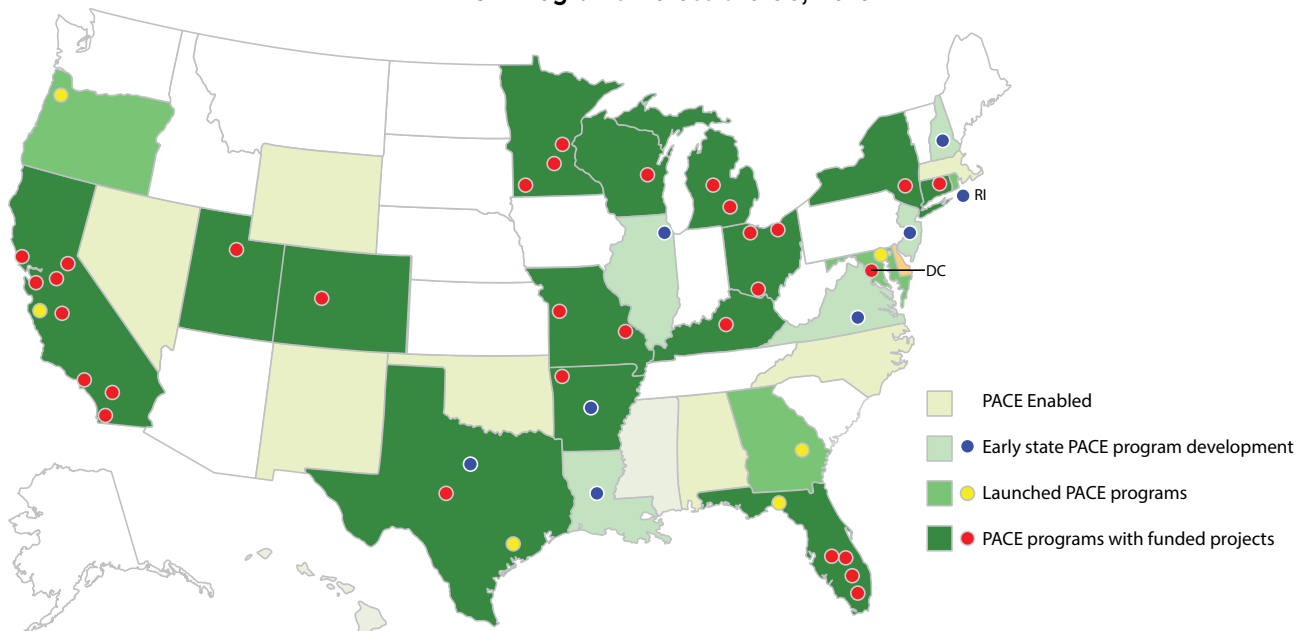
- Talk to your internal finance team to learn about the company's history and comfort using tax assessments as financing.
- Reach out to [your local PACE administrator](#) to learn more about the program in your area.
- Refer to [PACENation](#), as they maintain the most up to date information about PACE and have many resources to assist you.

### Funding by Property Type (2009 - present)

*As of Q1 2016*



### PACE Programs Across the US, 2016



Source: PACENation



## PACE IN THE MARKET

The Property Assessed Clean Energy (PACE) model is an innovative mechanism for financing energy efficiency and renewable energy improvements. PACE programs allow local governments, state governments, or other inter-jurisdictional authorities, when authorized by state law, to fund the up-front cost of energy improvements on commercial and residential properties.

Property owners repay their improvement costs over a set time period—typically 10 to 20 years—through property assessments, which are secured by the property itself and paid as an addition to the owners' property tax bills. Nonpayment generally results in the same set of repercussions as the failure to pay any other portion of a property tax bill. A PACE assessment is a debt of property, meaning the debt is tied to the property as opposed to the property owner(s), so the repayment obligation may transfer with property ownership depending upon state legislation. This eliminates a key disincentive to investing in energy improvements, since many property owners are hesitant to make property improvements if they think they may not stay in the property long enough for the resulting savings to cover the upfront costs. PACE legislation for commercial properties has been adopted in [30 states and the District of Columbia](#).

The retail sector has been the most active user of commercial PACE, [closing on \\$45.7 million in financing to date](#). Completed commercial PACE

deals have ranged from \$2,000 on the low-end to \$8.4 million on the high end. Some PACE districts allow building owners to extend their Loan-to-Value ratio (LTV) beyond typical limits, which allows owners to get additional financing for energy efficiency or sustainability improvements beyond what a lender would typically allow.

BrandsMart, a retailer based in Florida, worked with the clean energy financier [Ygrene Works](#) and [Florida Green Energy Works](#) to successfully arrange PACE deals in three of its stores since 2014. [The deals ranged in size from \\$1.8 million to \\$3.1 million](#), for a total of \$7.1 million financed. The latest deal, worth \$3.1 million in BrandsMart's Miami Gardens store is expected to generate \$310,000 in savings annually. The stability of property tax repayment, alongside lowered upfront costs, allows retailers to pursue energy efficiency projects that extend beyond the typical limits of their company's internal payback or hurdle rate.

A building owner is the greatest beneficiary of PACE financing, which makes it a viable option for retailers that own their buildings. For that same reason, the benefits of PACE for a retail tenant are significantly reduced and other options may better suit their energy efficiency needs. However, if any part of a retailer's portfolio is owned, including stores, warehouses, distribution centers, and corporate offices, PACE is an attractive option to pursue deep retrofits at low cost.

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.*

*This resource was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*

# ON-BILL FINANCING (OBF) AND ON-BILL REPAYMENT (OBR)

Prepared By:



On-bill financing (OBF) and repayment (OBR) are financing options whereby a utility or lender supplies capital to a utility customer to make energy efficiency improvements and is repaid through regular monthly loan payments on an existing utility bill. One of the benefits of these programs is the potential to serve a broad set of retailers, including retailers in both owned and leased spaces.

OBF and OBR have been successful across the country and are great mechanisms for retailers that have control over their utility bills in eligible utility territory. OBF and OBR can be particularly appealing due to their short terms, low to zero interest rates, and convenient structures.

## Why should you use it?

- Your company is looking for a simple mechanism to finance energy efficiency projects that lower utility bills and benefit your bottom line.
- Your company is open to low or zero interest loans specifically for energy efficiency that are paid for with energy savings directly on your utility bill.
- Your company is seeking financing for specific energy conservation measures with a short to medium payback period (2-5 years).

Utilities across the country have their own variation of OBF and OBR programs, including, but not limited to: [National Grid](#), [Eversource](#), [Pepco](#), [Pacific Gas and Electric](#), [Seattle City Light](#), and [Southern California Edison](#). Specific programs vary by utility.

## What are the advantages?

- **Convenient Structure** – Paying back the loan directly on the utility bill is convenient. A majority of customers see a reduction or no change in their bill.
- **Great for Leased Space** – So long as the retailer is billed by the utility or is authorized to be considered an extension of the utility customer, it is a viable option for those in leased space.
- **Flexibility** – There is flexibility for retailers who wish to change locations, as the repayment obligation can be passed along to future tenants.
- **Favorable Rates & Standardized Processes** – Low to zero interest rates are available, as programs are typically ratepayer funded. There are reduced program costs because of standardized processes.

## Who has used it in the past?

Commercial on-bill programs have been successful across the country and have lent at least \$197 million for efficiency projects, since 2000.

Several retailers in the food and grocery industry have utilized on-bill programs in recent years with favorable results. A grocer based in California qualified for a \$100,000 zero-interest loan through PG&E and is saving over \$20,000 per year. The company leveraged the program to add to their bottom line and now uses 42% less energy made possible by a (zero-interest) loan that will be repaid in full via their utility bill in less than 5 years.



This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

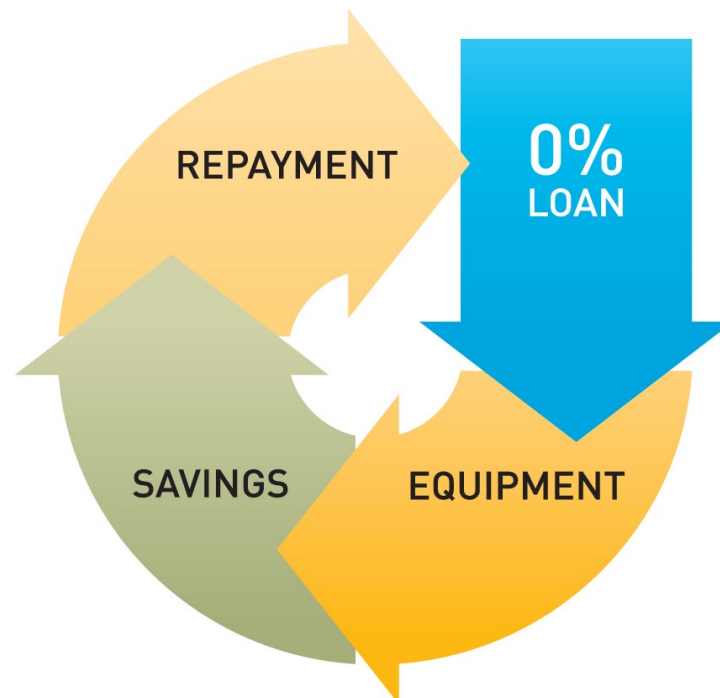
### What are the downsides?

- On-bill programs are only offered by select utilities and program specifications vary by utility. Therefore, on-bill financing may be difficult to implement as a portfolio-wide initiative.
- On-bill programs are not suited for very large projects.
- The consequence of non-repayment is utility disconnection.
- Savings are not guaranteed, so returns rely on accuracy of projected energy savings.

### Who should you talk to next?

- Talk to your internal finance team to learn more about the company's history and comfort with utility financing programs.
- Reach out to your local utility to inquire about the on-bill programs in your area or visit the Database of State Incentives for Renewables & Efficiency at [www.DSIREUSA.org](http://www.DSIREUSA.org).

### Equipment Savings Cycle



Source: PG&E's equipment savings cycle, Volume II: Innovations Across the Grid, December 2014



## ON-BILL IN THE MARKET

On-bill financing (OBF) and repayment (OBR) are financing options whereby a utility or lender supplies capital to a utility customer to make energy efficiency improvements and is repaid through regular monthly loan payments on an existing utility bill. One of the benefits of these programs is the potential to serve a broad set of retailers, including retailers in both owned and leased spaces.

When funds are provided by the utility, the repayment structure is termed OBF. OBR is when a private financial institution extends loans to utility customers and relies on the utility's bill presentment function for repayment. On-bill programs have mostly focused on energy efficiency measures, though renewable energy and water efficiency projects may be eligible as well. On-bill programs vary by state and by provider, and each program has its own terms and processes.

Commercial on-bill programs have been successful across the country and have lent at least \$197 million for efficiency projects. Two successful programs are offered by [Pacific Gas and Electric \(PG&E\)](#) and [Eversource \(formerly included CL&P\)](#). PG&E offers loans ranging in size from \$5,000 to \$100,000 and has financed \$65 million worth of projects since the program began in 2010. Eversource's Small Business Energy Advantage program has completed over 7,000 loans since its inception in 2000 with an average loan size of just over \$10,000.

Several retailers in the food and grocery industry have utilized on-bill programs in recent years with favorable results. A grocer based in California qualified for a \$100,000 zero-interest loan through PG&E and is saving over \$20,000 per year. The company was able to use the program to add to their bottom line and now uses 42% less energy in their facility, enabling them to achieve a [Green Business Certification](#). The facility will repay their loan in full in less than 5 years.

A pizza restaurant in California is also benefitting from PG&E's on-bill program, as they received a \$5,660 zero-interest loan and are saving close to \$3,000 annually on utility bills. In just 2 years, the loan will be repaid in full and the restaurant will continue to see an 18% reduction on their utility bill.

In sum, on-bill programs are perhaps the best fit for retailers looking for a quick solution to finance energy efficiency upgrades and reduce utility expenses. Not only can the energy and cost savings be significant, but on-bill programs also typically achieve 2-5 year payback periods, which meet a typical retailer's internal payback threshold. Contact a local utility or visit the Database of State Incentives for Renewables & Efficiency at [www.DSIREUSA.org](http://www.DSIREUSA.org) for more information about the on-bill programs in your area.

---

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.*

*This resource was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*

Prepared By:



# TAX INCREMENT FINANCING (TIF)

Tax Increment Financing (TIF) is a financing option that uses expected future gains in state or municipal property taxes from a development or redevelopment project to finance improvements that will create those gains. It has been used as a community development tool for decades. TIF is offered by jurisdictions to attract private capital to boost local economies and attract unique, innovative projects.

TIF is a great source of gap financing, which can increase the financial feasibility of projects. It has been used in various sectors including retail, commercial, residential, and mixed-use development. For a retailer, TIF would help improve the returns on sustainability components of a major retrofit or new construction, such as the addition of solar PV panels or the construction of an efficient prototype.

## Why should you use it?

- Your company wants to build a new store or rehab an existing store.
- Your company needs gap financing to increase the viability of a project.

## Who has used it in the past?

TIF has been used as a community development tool for decades in various sectors including retail, commercial, residential, and mixed-use development.

In 2003, a Target Retail Center in Millville, New Jersey, which occupies 125,000 square-feet of retail space used TIF. With total development costs of \$13 million, the city agreed to provide \$1 million toward the cost of infrastructure improvements. Target incurred the costs, and the city reimbursed the \$1 million. Additionally, the city agreed to a 15-year tax abatement, with payments in lieu of taxes being paid on the basis of two percent of project cost.

Other retailers that have recently used TIF are [Shoprite](#), [Kohl's](#), [Dick's Sporting Goods](#), [Circuit City](#), [Lane Bryant](#), [Starbucks](#), [Target](#), [Macy's](#), and [JC Penney](#).

## What are the advantages?

- **New Construction and Major Rehabs** – TIF can be used to finance costs associated with building new infrastructure or rehabbing existing infrastructure, including energy conservation and other sustainability measures.
- **Not New to the Retail Sector** – Many retailers have already taken advantage of TIF.
- **Community Development Yields Positive Press** – Being a part of a larger community development project can bring positive press and improve the company's image.

## What are the downsides?

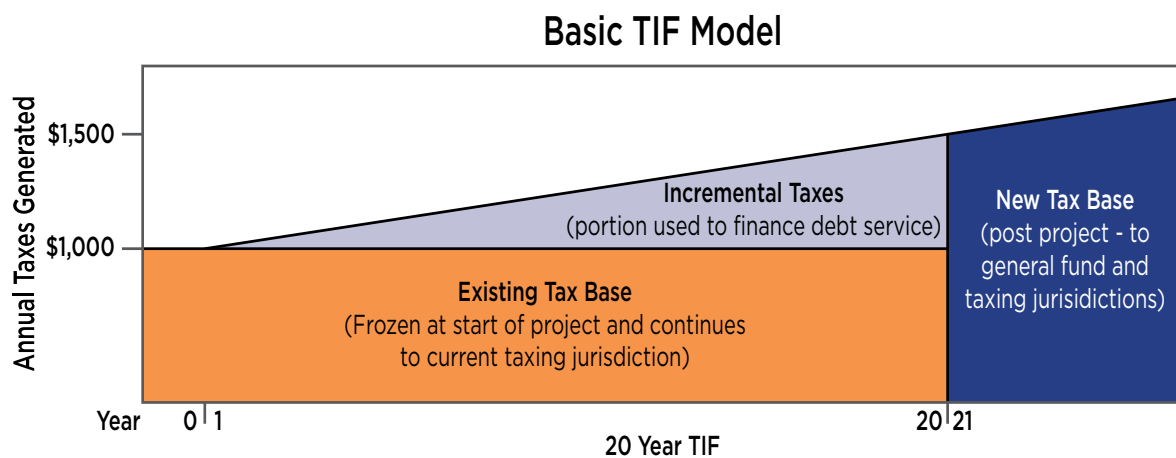
- The TIF process can be time consuming (more than a year), as deals require cooperation from multiple entities (including local government) and often require customized terms or subsidies.
- A single retailer's influence can be diluted because many players are involved in developing the terms of the deal.
- The developer often secures other sources of financing, which could result in debt for retailers that do not have the upfront capital.
- Projects are confined to TIF districts, so it cannot be used for portfolio-wide initiatives.



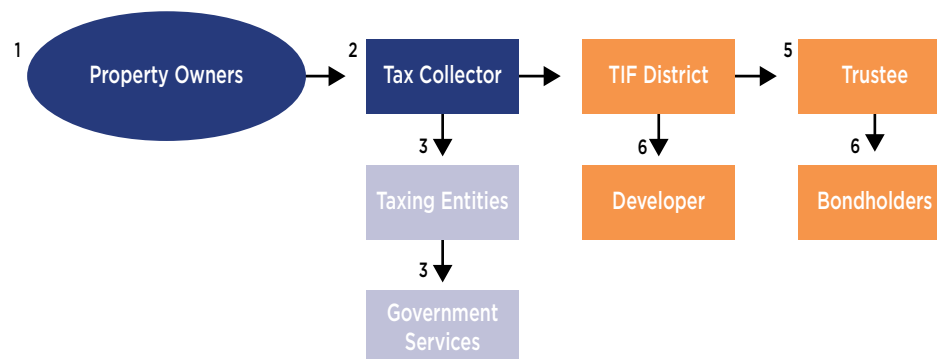
This resource was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

## Who should you talk to next?

- Talk to your internal finance team to learn about the company's history and comfort with community development projects and tax abatements.
- Reach out to local TIF district officials to learn more about potential projects in your area ([49 states and the District of Columbia have enabled TIF through legislation](#)).
- Refer to the [Tax Increment Finance Best Practices Reference Guide](#) and the [Council of Development Finance Agencies](#) for more information.



## Flow of Funds in a Typical TIF Transaction



1. A TIF district is formed and development occurs in the district.
2. Property taxes are levied and collected in the same manner as "non-TIF" property taxes.
3. The base year (i.e., the taxes that were generated at the time the TIF district was adopted) accrue to the benefit of the taxing jurisdictions.
4. The increase in taxes above the base amount (i.e., incremental taxes) accrues to the benefit of the TIF district for any permissible use.
5. Once bonds are issued, the incremental property taxes in an amount equal to debt service flow to the trustee for payment to bondholders.
6. Annual tax increment not needed for debt service flows to either the redevelopment authority or the developer per the provisions of the development agreement.

Source: *TIF Best Practices Reference Guide*, CDFA and ICSC, 2007



## TIF IN THE MARKET

Tax Increment Financing (TIF) is a financing option that uses expected future gains in state or municipal property taxes from a development or redevelopment project to finance improvements that will create those gains. It has been used as a community development tool for decades. TIF is offered by jurisdictions to attract private capital to boost local economies and attract unique, innovative projects.

TIF is a great source of gap financing, which can increase the feasibility of projects. Gap financing is a secondary source of capital for a large project (a bank loan or mortgage is typically the primary source) that can be used to finance energy efficiency improvements. TIF has been used by many retailers including [Shoprite](#), [Kohl's](#), [Dick's Sporting Goods](#), [Circuit City](#), [Lane Bryant](#), [Starbucks](#), [Target](#), [Macy's](#), and [JC Penney](#).

In 2003, the city of Millville, New Jersey designated 821 acres as a TIF district. This designation spurred development including the [Goodmill Shopping Center and a Target Retail Center](#). The Goodmill Shopping Center is a 500,000 square-foot facility whose tenants include ShopRite, Kohls, Starbucks, and others. The development cost for this project was \$55 million.

A Target Retail Center, which occupies 125,000 square-feet of retail space, is connected with the Goodmill Shopping Center but under separate

ownership. Development costs for Target were \$13 million.

The New Jersey Economic Development Authority (NJEDA) supported the Goodmill Shopping Center project and provided critical financing. NJEDA committed \$22.5 million in New Markets Tax Credit funding, which made the project feasible. The City also agreed to provide \$1.5 million toward the costs incurred by it for infrastructure improvements necessary for the site and facilities construction. As part of the agreement, Goodmill incurred the costs and was reimbursed by the city. The city provided an additional financial incentive: a five-year tax abatement, with payments in lieu of taxes increasing by 20 percent annually. Similarly, with Target, the city agreed to provide \$1 million toward the cost of infrastructure improvements. Target incurred the costs, and the city reimbursed the \$1 million. Additionally, the city agreed to a 15-year tax abatement, with payments in lieu of taxes being paid on the basis of two percent of project cost.

In sum, TIF should be viewed primarily as a financing mechanism for large individual projects with community development at the core. Although sustainability has not been the focus of TIF in the past, it would be appropriate to include as part of a TIF project. For more information on TIF and additional case studies see the [Tax Increment Finance Best Practices Reference Guide](#).

---

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007062.*

*This resource was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*

# ADDENDUM

## Summary of Energy Efficiency Financing Options





# Summary of EE Financing Options

Energy Efficiency Financing Mechanism	Viable in Leased Space	Off Balance Sheet	Available in all Jurisdictions	Project Size	3rd Party Involvement	100% Project Financing	Finance Term	Overcome Hold Barrier	Lead Time Required to Get Financing
Major Initiatives	Green Bond	Yes	No	Typically \$5,000,000 or more	Yes, bond issuance is done through traditional bonding process.	Yes	Until bond maturity, typically 5-10 years	Yes	6 months or less
Traditional Energy Efficiency Financing	Energy Service Agreement	Yes, if contract term matches lease term	Yes	\$1,000,000 or more	An energy service provider offers project management	Yes	5-15 years	Yes, if new owner adopts or buys out contract	9 to 24 months
	Managed Energy Service Agreement	Yes, if contract term matches lease term	Yes	\$500,000 or more	An energy service provider offers project and facility management	Yes	5-15 years	Yes, if new owner adopts or buys out contract	9 to 24 months
	Energy Performance Contract	No	Unlikely, pending FASB	\$1,000,000 or more	An Energy Service Company provides project management	Yes	10-20 years	No	1 year or more
Specialized Financing	Property Assessed Clean Energy	No	Likely, pending FASB	\$25,000+	PACE involves multiple entities including program administrators and often a specialized lender	Yes	10-25 years	Yes	6 months or more
	On-Bill Financing/ Repayment	Yes, if retailer is billed by the utility or is authorized to be an extension of a utility customer	Unlikely, pending FASB	Typically \$5,000 - \$100,000	For On-Bill Financing, no. For On-Bill Repayment, a private financial institution extends the loan.	Yes	Typically 2-5 years, but some programs offer longer terms	Yes, if on-bill financing No, if on-bill repayment	3 months or less
	Tax Increment Financing	No	Yes	None, but to use TIF any project must be rolled into a larger construction or retrofit project (\$10,000,000+)	TIF involves multiple entities including local government, development authorities, and project developers	No, gap financing	The maximum amount of time the increased taxes are redirected to the project varies from 10 to 30 years	No	1 year or more