

Small Businesses Save Big:

A Guide To Help SBA Lenders Understand and Communicate the Value of Energy Efficiency Investments

Why Should I Encourage Small Businesses To Invest in Energy Efficiency?

Dollars saved through energy efficiency can directly impact your bottom line. Whether you are planning for a major renovation or upgrading individual pieces of building equipment, these improvements can help reduce operating costs, save on utility bills, and boost profits.

For U.S. Small Business Administration (SBA) lenders, this is good news. A boost in profit may help lower risk of default. Furthermore, engaging customers in energy efficiency discussions can enhance their lending experience and the brand image of your lending institution. It can also help to secure market share among the growing number of environmentally concerned consumers (SBA 2014).

Encouraging investments in energy efficiency may also align with institutions whose mission is to deliver financial services to underserved markets, or with lenders who anticipate that small

commercial buildings will need energy efficiency improvements to meet building code requirements (ACEEE 2014a).

To help SBA lenders understand the benefits of encouraging small businesses to invest in energy efficiency, SBA, the U.S. Department of Energy (DOE), and DOE’s National Renewable Energy Laboratory (NREL) have collaborated to provide easy-to-use information to communicate the benefits of energy efficiency to borrowers, assist with business case development, and quantitatively evaluate energy efficiency projects.

What Should I Do?

There are many ways to improve the performance of a building, and each building offers unique opportunities. [To ensure your customers are getting the maximum bang for their buck, recommend that they consult a qualified contractor or energy auditor to reveal the most cost-effective energy efficiency solutions that can improve their cash flow.](#)



Small businesses are an often overlooked opportunity for energy efficiency investments with short-term, low risk financial returns.

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Meanwhile, it is important to communicate the value proposition of energy efficiency to your customer. Besides lowering utility bills and improving cash flow, they will see additional “nonenergy” benefits. For example, upgrades that improve the amount of daylight in a space and increase the quality of lighting, can help increase productivity and improve customer experience. Likewise, improvements to heating, ventilation, and air conditioning (HVAC) systems can improve air quality, occupant comfort, and well-being. These extra benefits can be hard to quantify and are often omitted from financial analyses, but should be considered in the business case because they often impact the bottom line (DOE 2014a).

Investments in energy efficiency can also increase rental income and the future value of real estate assets—another way to boost the business case and return on investment (WGBC 2012). Furthermore, investing in energy efficiency and sustainability can support the marketability of products or services that the business offers, by enhancing their brand image and again, securing market share among environmentally concerned consumers (SBA 2014).

There is nothing small about the impact that small commercial buildings have on energy use in the United States. In fact, the 4.6 million small buildings across the nation consume 44% of the overall energy used in buildings, presenting an enormous opportunity to cut costs, energy use, and greenhouse gas emissions (DOE 2013). Furthermore, small buildings often house small businesses. Research indicates that the 4.6 million small commercial buildings are home to approximately 5.9 million small businesses nationwide (PGL 2013).

Encouraging small businesses to invest in energy efficiency can:

- Lower the risk of default.
- Enhance your customer’s lending experience.
- Enhance the brand image of your lending institution.
- Secure market share among environmentally concerned consumers.
- Support missions to deliver services to underserved markets.
- Help small businesses meet new building code requirements.

Talk About Timing

Often a small business will seek financing to invest in building upgrades when a piece of building equipment or part of the building structure begins to fail. It is best if the business aligns these natural opportunities in the building life cycle with energy-saving improvements, for this synergy can allow businesses to invest in energy-saving improvements more cost effectively (NREL 2013). Lenders should be aware of these timing opportunities and communicate them to their customers, which can occur during:

- Time of purchase
- Regular renovations, redevelopment, or market repositioning
- Planned roof, window, or siding replacement
- End (or near end) of life for HVAC, lighting or other major equipment replacement
- Emergency and scheduled maintenance
- Upgrades to meet code
- The ultimate sale of the asset.

Point Your Borrowers to Available Resources

A number of technical resources are available to help your customers understand how to invest in energy efficiency. These resources include both new construction and retrofit projects, and multiple building types. They provide assistance with business case development, benchmarking, setting energy targets, economic analysis, cost control methods, and risk management. A few recommended resources follow:

SBA: SBA offers a number of resources to help small businesses improve their building efficiency and green business practices. Have your customers schedule a free business development meeting with a local SBA Small Business Development Center, Women's Business Center, or SCORE Association (Counselors to American Small Businesses). These entities can work with SBA members to incorporate energy efficiency and guidance from SBA's **Green Business Guide** (<http://www.sba.gov/green-business-guide>), into their business model. They can also help navigate other SBA resources dedicated to **energy efficiency and sustainable business practices** (<http://www.sba.gov/category/navigation-structure/energy-efficiency>).

SBA, DOE, and NREL also worked together to provide a companion to this document, titled **A Borrower's Guide To Increase the Bottom Line Using Energy Efficiency**. Point your customers to this document as a starting point for more



Small business owners must juggle many responsibilities, and may need assistance from lenders to find out if energy efficiency investments are right for them. Illustration from iStockPhoto, 37883054

detailed information on how to invest in energy efficiency. Visit NREL's website to download the document: <http://www.nrel.gov/docs/fy15osti/62960.pdf>.

Advanced Energy Design Guides:

For new construction projects, the Advanced Energy Design Guides will help project managers identify and set energy targets, understand integrated design and cost control, and implement building commissioning. The guides also include recommendations for climate-specific energy efficiency improvements and outline processes that guide project managers through a successful project. Visit the ASHRAE website for more information and free downloads: <https://www.ashrae.org/freeaedg>.

Advanced Energy Retrofit Guides: For building retrofits, the Advanced Energy Retrofit Guides help existing building owners plan, design, and implement energy improvement projects in their buildings. The guides also provide discussion on the difference between quick payback projects versus deep retrofits, benchmarking, setting energy targets, economic analysis, cost control methods, and risk management. Visit DOE's EERE website for more information and free downloads: <http://energy.gov/eere/buildings/advanced-energy-retrofit-guides>.

Resources for Informed Small Business Energy Efficiency Decision Making: This document provides a thorough summary of available energy savings calculators, purchasing and procurement case studies, incentive programs, and general information and resources that can help small businesses make smart decisions around energy efficiency. For more information, visit: <http://www.anl.gov/energy-systems/downloads/sb-ee-resources>.

Architecture 2030 District Small

Commercial Toolkit: The Architecture 2030 District Small Commercial Toolkit includes technical tools that enable project managers to identify, execute, and track energy savings for small commercial properties. For more information, visit: <http://www.2030districts.org/toolkits>.

ENERGY STAR® for Small Business:

Through the ENERGY STAR Small Business website, small businesses can find technical resources for small businesses, ask technical questions, and peruse guidance on existing buildings for a) setting up an energy management program, b) benchmarking energy performance in ENERGY STAR Portfolio Manager, c) saving energy, and d) receiving recognition from the U.S. Environmental Protection Agency. For more information, visit: <http://www.energystar.gov/buildings/facility-owners-and-managers/small-biz>.

America Saves!: Supported by DOE, the Preservation Green Lab of the National Trust for Historic Preservation is currently working with a team of experts to test a program for pinpointing long-term energy cost savings in existing small buildings. The America Saves! pilot will use energy and facility information to show the

financial attractiveness of money- and energy-saving building improvements. If your customer's building is in a Main Street District, visit the link below to see if these energy efficiency services are offered in your area. For more information, visit: <http://www.preservationnation.org/information-center/sustainable-communities/green-lab/america-saves/>.

Assist in Business Case Development

Many cash flows, both positive and negative, may be associated with a customer's building efficiency project (DOE 2014a).

To calculate the cost and payback of an efficiency investment, make sure your customer considers the following:

Positive cash flows:

- Annual cost savings for electricity
- Annual cost savings for natural gas
- Annual cost savings for water and other resources
- Change in operation and maintenance costs (usually positive, but can be negative in some cases)

- Salvage value of existing equipment (for retrofits only)
- Financial incentives (rebates, tax credits, etc.)

Negative cash flows:

- Purchase cost of equipment
- Installation cost of the equipment and other efficiency upgrades
- Disposal cost of existing equipment (for retrofits only)
- Cost of planning and designing energy efficiency measures
- Additional measurement and verification costs, if any
- Replacement cost at the end of useful life for energy efficiency measures/packages

Financial assistance can also come from federal, state, or utility programs. Many utilities have incentive programs that come in the form of a reduced cost energy audit or rebates for building equipment. For a full list of utility, state, and federal rebates offered for energy efficiency and renewable energy, have your customer visit the Database of State Incentives for Renewables & Efficiency website (www.dsireusa.org).

Who Can Help Me?

In addition to the resources available for your customer, SBA offers information specifically for lenders about SBA loan programs. Visit SBA's lender website for more information: <http://www.sba.gov/for-lenders>.

The American Council for an Energy Efficient Economy (ACEEE) also offers a variety of resources related to energy efficiency financing. ACEEE seeks to better understand effective financing opportunities as a critical aspect of improving energy efficiency in homes and businesses (ACEEE 2014b). ACEEE's annual Energy Efficiency Finance Forum, designed for investors, financiers, utilities, and policymakers, surveys the energy efficiency financial landscape, including the latest innovations in financial structures and models (ACEEE 2014b). Visit ACEEE's Energy Efficiency Financing website for more information: <http://www.aceee.org/topics/energy-efficiency-financing>.

Which SBA Loans Can Be Used for Building Energy Efficiency Improvements?

Two main SBA loan programs can be promoted to help customers finance energy efficiency investments: the 7(a) General Small Business Loan and the CDC/504 Real Estate & Equipment Loan. Depending on the scale and type of project, the 7(a) Express loan, SBA microloans, and in areas that have been damaged by a declared disaster, SBA's low-interest disaster loan

Help Mitigate Risk. Business owners should be aware of ways to mitigate risks associated with building performance—to increase the chances of achieving estimated energy savings and reduce the risk of default (NREL 2014). Recommend these common risk mitigation strategies to your customer.

Low Cost Methods for Managing Uncertainty in Energy Savings



If your building has centralized building controls, use them to automatically adjust operating parameters (lighting levels, thermostat settings, ventilation rates) to achieve the intended building performance. Otherwise, use decentralized controls such as vacancy sensors for lighting, programmable thermostats for heating and cooling, and smart power strips for plug loads.



Establish corporate policies to encourage and manage energy efficient building operation.



Make sure lights and plug loads are turned off at night, and throughout the day when not needed.



Apply upper and lower limits on heating and cooling temperature setpoints.



Regularly check and confirm that other aspects of the building are being operated as intended (window opening/closing, blinds to control solar gains, computer energy management settings) and look for possible operational improvements.



For building owners with tenants, use leasing language to shift relevant components of performance risk to tenants who are in control of building operations and occupancy levels, and consider green leases.



Consolidate occupants to the extent possible, to reduce the need to condition and power underutilized office space.



Recommission the building regularly (balance air distribution, verify sensor operation, tune up boilers) to ensure the building equipment is operating at its maximum efficiency.

Use these SBA loan programs to finance building upgrade and energy efficiency projects:

- 7(a) General Small Business Loan
- CDC/504 Real Estate & Equipment Loan
- 7(a) Express Loan
- SBA Micro Loans
- SBA Low-Interest Disaster Loan

can also be considered. Make sure your customer is also aware of the CDC/504 loan program bonus for projects that can reduce energy consumption by 10%. For those projects, the maximum debenture increases from \$5 million to \$5.5 million. More information can be found at www.sba.gov.

Which Efficiency Evaluation Methods Are Available?

DOE's Commercial Building Energy Asset Score allows building owners and managers to more accurately assess building energy performance. The Asset Score program acts as a national standard, encouraging investment in energy efficiency and informing real estate transactions by allowing "apples to apples" comparisons (DOE 2014c). The Asset Scoring Tool allows building owners or lenders to

evaluate a building's as-built efficiency and potential efficiency in a consistent and objective manner, and to identify short-term and long-term capital investment needs (DOE 2014c).

For building appraisals, visit the Appraisal Institute's Green Building Resources: <http://www.appraisalinstitute.org/education/education-resources/green-building-resources/>.

The Appraisal Institute offers courses and information about valuation of sustainable buildings that can be used to enhance your existing lending program.

Building energy simulations can help quantify building energy and energy savings, but can require specialized engineering knowledge. For more complex projects, your customers should hire an energy consultant or energy-consulting

firm with energy simulation capabilities. A number of credible tools are available; many of which use DOE-2 or EnergyPlus simulation engines - like OpenStudio. A full list of these tools, ranging from simple user-friendly software to advanced modeling programs, can be found on the following Building Energy Software Tools Directory: <https://buildingdata.energy.gov/cbrd/resource/705>.

Additional suggestions to ensure savings and evaluate efficiency include:

- Encourage the borrower to hire a certified energy auditor.
- Read project engineering or audit reports about energy efficiency.
- Require that engineering or energy audit reports be from a credible source such as a qualified architectural/engineering firm or energy engineer.

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