



# Resources for Informed Small Business Energy Efficiency Decision Making

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## Calculators

### ENERGY STAR Savings Calculators

The Environmental Protection Energy (EPA) ENERGY STAR program provides numerous Microsoft Excel-based calculator tools to help users estimate the potential energy and financial savings associated with purchasing new ENERGY STAR products. These calculators are provided for use in conjunction with the following products.

1. Commercial Food Service Equipment
  - a. Commercial Dishwashers
  - b. Commercial Freezers
  - c. Commercial Refrigerators
  - d. Commercial Fryers
  - e. Commercial Griddles
  - f. Commercial Hot Food Holding Cabinets
  - g. Commercial Ice Machines
  - h. Commercial Ovens
  - i. Commercial Steam Cookers
2. Appliances
  - a. Air Purifiers (Cleaners)
  - b. Clothes Washers
  - c. Compact Refrigerators
  - d. Dehumidifiers
  - e. Dishwashers
  - f. Freezers
  - g. Refrigerators
3. Consumer Electronics
  - a. Audio/Video
  - b. Televisions (TVs)
4. Heating and Cooling Products
  - a. Air Source Heat Pumps
  - b. Central Air Conditioning (AC)
  - c. Furnaces
  - d. Room AC
5. Lighting Products
  - a. Light Fixtures and Ceiling Fans
  - b. Light Bulbs
6. Office Equipment Products
  - a. Computers
  - b. Displays (Computer Monitors, Professional Signage)
  - c. Imaging Equipment (Copiers, Fax Machines, Multifunction Devices, Printers, Scanners)
  - d. Voice over Internet Protocol (VoIP) Telephones



7. Pool Pumps
8. Products with Suspended Specifications
  - a. Exit Signs
  - b. Programmable Thermostats

To access the ENERGY STAR savings calculators, visit: <http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/save-energy/purchase-energy-saving-products>.

### ENERGY STAR Return on Investment Calculators

ENERGY STAR calculators associated with the following topics provide financial guidance for potential energy efficiency improvements. These can be used to determine the extent to which improved energy performance can generate cash flow, increase real estate value, and improve a facility's ENERGY STAR score.

1. Cash Flow Opportunity
2. Financial Value
3. Building Upgrade Value

To access the ENERGY STAR return on investment calculators, visit: <http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/find-financing/calculate-returns-energy-efficiency>.

### ORNL Roof Savings Calculator

Oak Ridge National Laboratory (ORNL) provides a calculator in cooperation with the U.S. Department of Energy (DOE) that utilizes advanced modeling software to help users estimate the annual cost and energy savings achieved by installing new residential or commercial roofing products.

To access the ORNL Roof Savings Calculator, visit: <http://rsc.ornl.gov>.

### DOE Cost Savings Calculators for Energy Efficient Products

DOE provides a set of calculators to estimate the cost savings obtained by using the following energy- and water-efficient products.

To access the DOE cost savings calculators for energy efficient products, visit: <http://energy.gov/eere/femp/energy-and-cost-savings-calculators-energy-efficient-products>.

Energy- and Water-Efficient Products	
1. Air-Cooled Chillers	13. Clothes Washers (Commercial)
2. Boilers	14. Clothes Washers (Residential)
3. Commercial Heat Pumps	15. Dishwashers
4. Commercial Rooftop Air Conditioners	16. Fryers
5. Air Source Heat Pumps	17. Griddles
6. Central Air Conditioners	18. Hot Food Holding Cabinets
7. Electric and Gas Water Heaters	19. Ice Machines
8. Gas Furnaces	20. Ovens
9. Solar Hot Water System	21. Steam Cookers
10. Computers, Monitors, and Imaging Equipment	22. Condensing Water Heaters
11. Compact Fluorescent Lamps	23. Faucets and Showerheads
12. Dishwashers	24. Urinals

### Architecture 2030 Small Commercial Toolkit Calculators

The 2030 District Small Commercial Toolkit is a DOE-funded program that provides products to help small commercial buildings identify, execute, and track energy savings from retrofits. This toolkit currently includes energy savings calculators for the following products, with several more in development.

1. Air-Cooled Electric Chiller
2. Closed Loop Commercial Boiler
3. Commercial Heat Pump
4. Roof Top HVAC

To access the Architecture 2030 Small Commercial Toolkit calculators, visit: <http://www.2030districts.org/small-commercial-toolkit>.

### Argonne Energy Efficiency Decision Support Calculator

Argonne National Laboratory (Argonne) has developed a user-friendly calculator that provides a high-level overview of the cash flow implications of loans that are used to achieve energy savings measures.

To access the Argonne Energy Efficiency Decision Support Calculator, visit: [www.anl.gov/energy-systems/downloads/sb-ee-calculator](http://www.anl.gov/energy-systems/downloads/sb-ee-calculator).

## DOE Building Energy Software Tools

DOE also maintains a range of other more advanced software tools that can be used to model energy consumption in buildings. Most of these have much higher learning curves than the calculators presented above, but they also offer much more comprehensive analyses.

To access the DOE Building Energy Software Tools Directory, visit: [http://aps1.eere.energy.gov/buildings/tools\\_directory/doe\\_sponsored.cfm](http://aps1.eere.energy.gov/buildings/tools_directory/doe_sponsored.cfm).

## Case Studies

### ENERGY STAR Purchasing and Procurement Case Studies

These case studies review specific examples of businesses and organizations that achieved significant cost savings by adopting ENERGY STAR certified products:

<http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/save-energy/purchase-energy-saving-products/purchasing-case-studies>.



### ENERGY STAR Labeled Roof Product Case Studies

These case studies illustrate the potential cost and energy savings that can be obtained by ENERGY STAR roofing products:

[https://www.energystar.gov/index.cfm?c=manuf\\_res.roof\\_case\\_studies](https://www.energystar.gov/index.cfm?c=manuf_res.roof_case_studies).

### Cool California Small Business Case Studies

Cool California provides a large database of case studies that illustrate a variety of measures that different organizations have taken to simultaneously reduce operating costs and greenhouse gas emissions:

<http://www.coolcalifornia.org/small-business/business-case-studies>.

## ComEd Business Case Studies

Commonwealth Edison (ComEd) provides a number of case studies to illustrate how businesses have saved money by implementing energy-efficient measures:

<https://www.comed.com/business-savings/resources/Pages/case-studies.aspx>.

## U.S. Green Business Council Case Studies

The U.S. Green Business Council maintains a database of case studies that demonstrate concrete cost savings achieved through energy efficiency improvements. Profiles of companies that have implemented sustainable initiatives are also included: <http://www.usgbc.org/resources/list/case-studies>.

## World Green Business Council Case Studies

These case studies review successful energy efficiency improvements that have been undertaken by businesses and buildings around the world:

<http://www.worldgbc.org/activities/business-case/case-studies>.

## General Information and Resources

### ENERGY STAR Technical Resources for Small Businesses

ENERGY STAR provides several resources to help small businesses identify and implement energy efficiency improvements. These include the following documents:

1. Putting Energy Into Profits: ENERGY STAR Guide for Small Business
2. Save Energy, Money and Prevent Pollution with LED Exit Signs

There are also several resources tailored to specific industries, including:

1. Auto Dealers
2. Manufacturers
3. Restaurants

To access ENERGY STAR technical resources for small businesses, visit:

<http://www.energystar.gov/buildings/facility-owners-and-managers/small-biz/tech-resources>.

## ENERGY STAR Building Upgrade Manual

The ENERGY STAR *Building Upgrade Manual* is a comprehensive resource designed to help business owners and building operators implement capital improvements to realize maximum cost and energy savings:

<http://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/save-energy/comprehensive-approach/energy-star>.

## DOE Advanced Energy Retrofit Guides

These guides are designed to help energy managers and decision-makers plan, design, and implement energy efficiency improvements. Five different guides are available, each for a specific building type:

1. Office Buildings
2. Retail Buildings
3. Grocery Stores
4. K–12 Schools
5. Healthcare Facilities

These guides are available at:

<http://energy.gov/eere/buildings/advanced-energy-retrofit-guides>.

## ASHRAE Advanced Energy Design Guides

This set of design guides developed by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) offers suggestions for practical, off-the-shelf products that contractors, designers, and building owners can implement to achieve 30–50% energy savings:

<https://www.ashrae.org/freeaedg>.

## DOE Commercial Building Energy Asset Scoring Tool

This comprehensive tool allows building owners and operators to compare their building energy performance with their peers, while controlling for key variables:

<http://energy.gov/eere/buildings/commercial-building-energy-asset-score>.

## SBA Green Business Guide

The Small Business Administration (SBA) provides a set of resources designed to help small businesses develop in an environmentally responsible fashion. These resources include a guide to green marketing campaigns that can enhance brand image and generate business from environmentally concerned customers as well as information on grant and loan opportunities available to green businesses:

<https://www.sba.gov/green-business-guide>.

## The Business Case for Green Building

The World Green Building Council published a report that aggregates evidence of the business case for green buildings. This evidence demonstrated through case studies in five different categories:

<http://www.worldgbc.org/activities/business-case>.

## NREL Small Business Energy Efficiency Investment Fact Sheets

The National Renewable Energy Laboratory (NREL) provides the following fact sheets to help small business and lenders alike better understand the potential impacts of loans that are used to finance energy efficiency improvements.

1. A Guide to Help SBA Lenders Understand and Communicate the Value of Energy Efficiency Investments: <http://www.nrel.gov/docs/fy15osti/62959.pdf>.
2. A Borrower's Guide to Increase the Bottom Line Using Energy Efficiency: <http://www.nrel.gov/docs/fy15osti/62960.pdf>.

## ACEEE Energy Efficiency Finance 101

The American Council for an Energy-Efficient Economy (ACEEE) commissioned the following white paper, which provides an overview of the current business energy financing landscape: <http://aceee.org/white-paper/energy-efficiency-finance-101>.

## America Saves!

The Preservation Green Lab of the National Trust for Historic Preservation is collaborating with DOE to identify long-term energy savings in existing buildings. Community members can volunteer to provide information on the energy usage and attributes of their buildings; these data will be used by the Green Lab to determine opportunities for retrofits and energy savings: <http://www.preservationnation.org/information-center/sustainable-communities/green-lab/america-saves>.

## Incentive Programs and Funding Opportunities

### Federal

The following federal programs may provide financial assistance for businesses that wish to implement energy efficiency improvements and/or renewable energy technologies.

1. Business Energy Investment Tax Credit:  
<http://energy.gov/savings/business-energy-investment-tax-credit-itc>.
2. Energy Efficient Commercial Buildings Tax Deduction:  
<http://energy.gov/savings/energy-efficient-commercial-buildings-tax-deduction>.
3. USDA Rural Energy for America Program:  
[http://www.rurdev.usda.gov/bcp\\_reapreseei.html](http://www.rurdev.usda.gov/bcp_reapreseei.html).

### State and Utility

The Database of State Incentives for Renewables and Efficiency (DSIRE) provides a comprehensive overview of the incentives programs offered by specific states and utilities: <http://www.dsireusa.org>.