



Leveraging ENERGY STAR® Tools and Resources to Improve Energy Performance

September 27, 2007

Presentation Overview



- Why Energy Performance?
- Identify the Best Opportunities through **ENERGY STAR**
 - Commercial Partners
 - Assess Performance and Set Goals
 - Create and Implement an Action Plan
 - Evaluate progress
 - Recognize Achievements
- Success Stories

What is ENERGY STAR?



- Voluntary partnership between government, businesses and consumers
- Demonstrate environmental leadership through energy efficiency
- National symbol for superior energy performance

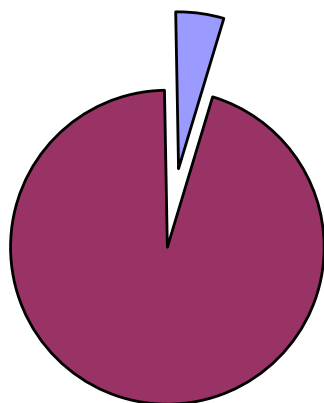


Why Energy Performance?

The Global Picture: US Energy Consumption



The US
represents 5% of
the world
population...

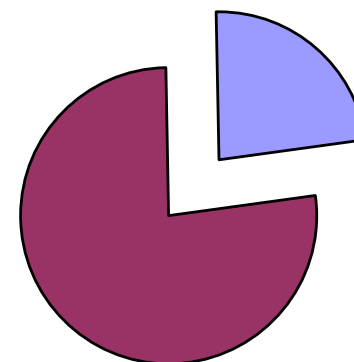


**U.S. CO₂ emissions
were 12.8 trillion
pounds in 2003**

**CO₂ is the most
prevalent greenhouse
gas driving climate
change**

**Over 80% of CO₂
emissions are from
fossil fuel combustion**

...But emits 23% of
the world's
carbon dioxide (CO₂)



Commercial Building Footprint



Commercial buildings account for 18% of the total U.S. energy consumption.

– Energy Information Administration



Energy Market Concerns



- Rising Electricity Prices
- Electricity Reliability Issues
- Rising Natural Gas Prices
- Natural Gas Reliability Issues
- Global Warming
- Environmental Stewardship
- Green Buildings



Green Starts with Energy



BOMA • Kingsley QUARTERLY

Practical Industry Intelligence for Commercial Real Estate
THE GREEN ISSUE | SPRING 2006

IT IS SIMPLER
than you think

Energy costs represent
30% of a typical building's
annual budget and is
the **single largest**
operating cost.



**Energy costs
represent 30% of a
typical building's
annual budget,
and is
the single largest
operating cost.**

Sector-Specific Value Messages



- **Office Buildings:** \$2.50 to \$3.75 in incremental asset value for \$1 invested
- **Hospitals:** Each dollar saved in energy costs equivalent to generating new revenues of \$20
- **Supermarkets:** 10% reduction in energy equivalent to increasing net profit margins by 15%
- **Hotels:** 10% reduction in energy costs equivalent to increasing Average Daily Rate by 2.6% and increasing Occupancy Rate by 4.3%

ENERGY STAR Impact



2006

- **Energy** - Savings equivalent to 5% of national electricity demand
- **Financial** - Saved \$14 billion annually
- **Environment** - Reduced greenhouse gas emissions equivalent to 25 million cars



ENERGY STAR is broad-based



- More than **two billion** ENERGY STAR **products** have been purchased.
- More than 2,000 builders have constructed over **525,000** ENERGY STAR **homes**.
- EPA's Energy Performance Rating System has been used to evaluate more than 30,000 **buildings**. More than **3,200** buildings have earned the ENERGY STAR.



ENERGY STAR Commercial Partners

9,000



ENERGY STAR Partners Include:

- Building Owners
Commercial and Corporate Real Estate, Retail,
Hospitality, Healthcare, Government and Schools
- Service and Product Providers
Businesses Providing Energy Efficiency Related
Products or Services
- Utilities and Other Regional Energy Efficiency
Program Sponsors
- Industry Associations



How to Become an ENERGY STAR Buildings Partner



- **Submit partnership letter**
- **Agree to:**
 - Measure, track, and benchmark your energy performance
 - Develop and implement a plan to improve your energy performance, adopting the ENERGY STAR strategy; and
 - Educate your staff and the public about your partnership and achievements with ENERGY STAR

www.energystar.gov/join



ENERGY STAR

Service and Product Provider Partner



- Architecture or A/E Firms
- Distributors
- Energy Consultants / Energy Management Services
- Energy Improvement Contractors
- Energy Service Companies (ESCOs)
- Engineering Firms
- Equipment Manufacturers
- Financial Services
- On-site Energy Production Services
- Unregulated Energy Retailers and Marketers

To join, www.energystar.gov/sppresources



Expert Help Service and Product Provider Directory



ENERGY STAR has an online, searchable SPP Directory to help you find the products and services you need to achieve your goals.

With the help of an SPP, you can:

- Assess the energy performance of your portfolio
- Set energy performance goals
- Create and implement an action plan
- Evaluate progress
- Get recognition

www.energystar.gov/spp

Expert Help Service and Product Provider Directory



Access to over 1,200 providers



Service and Product Provider Directory

ENERGY STAR service and product providers (SPPs) can help identify, prioritize and implement quality projects that will improve your total energy management. Use this Directory to locate the companies that can provide you the services and products that will help lower operating costs and increase your bottom line.

Market Served (check all that apply) <input checked="" type="checkbox"/> All Markets <input type="checkbox"/> Existing Commercial Buildings and New Construction <input type="checkbox"/> Industrial	Provider Location <input type="text" value="All States/Regions"/>
Provider Type (check all that apply) <input checked="" type="checkbox"/> All Provider Types <input type="checkbox"/> Architecture <input type="checkbox"/> Distributor <input type="checkbox"/> Energy Consultant / Energy Management Services Company <input type="checkbox"/> Energy Improvement Contractor <input type="checkbox"/> Energy Service Company (ESCO) <input type="checkbox"/> Engineering <input type="checkbox"/> Equipment Manufacturer <input type="checkbox"/> Financial Services <input type="checkbox"/> On-site Energy Production Services <input type="checkbox"/> Unregulated Energy Retailer and Marketer	Products and/or Services (check all that apply) <input type="checkbox"/> Products (available through provider) <input type="checkbox"/> Services (offered by provider)
Also Search By Keyword or Company Name <input type="text"/>	
<div>ENERGY STAR Activity (Limit search to only those SPPs that have been involved in the following ENERGY STAR activities over the last 12 months. Check all that apply.) Learn more about ENERGY STAR Activity</div> <div><input type="checkbox"/> Energy Performance Ratings <input type="checkbox"/> Labels <input type="checkbox"/> Buildings Improved by 10 points or more <input type="checkbox"/> Success Stories <input type="checkbox"/> Clients who are Leaders</div>	

View the Activities Chart to see which SPPs are the most active in utilizing ENERGY STAR's tools and/or resources to help their clients achieve portfolio-wide energy performance improvements.

[Most Active Service and Product Providers](#)

Search by:

- Market Sector
- Type of SPP
- Products &/or Services
- Location
- ENERGY STAR Activity

You can also search by keyword or company name.

www.energystar.gov/spp

Expert Help

SPP Most Active List



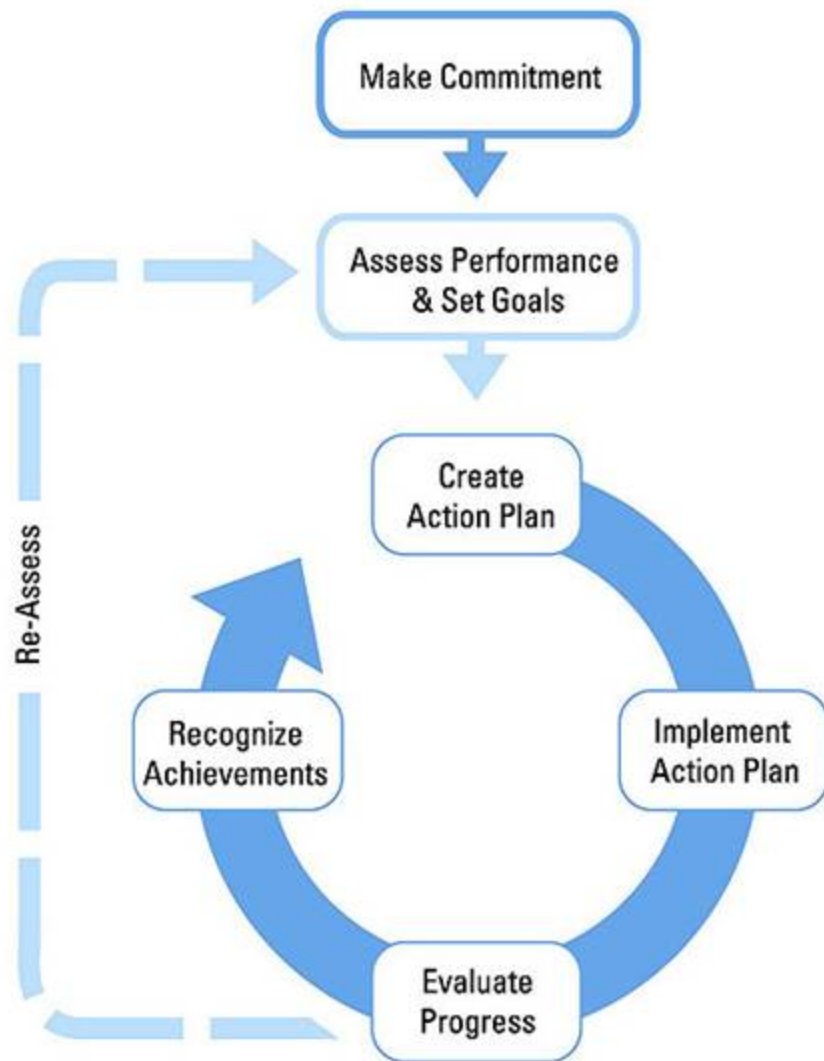
Most Active Service & Product Providers

Service and Product Providers continue to promote ENERGY STAR and deliver superior energy performance by helping building owners and managers make informed energy decisions for their facilities. These providers have been engaged in several [ENERGY STAR activities](#) within the past 12 months that can help identify opportunities to improve energy, financial and environmental performance. See who is doing the most for their clients through ENERGY STAR.

Company Name (*Indicates ENERGY STAR Partner of the Year Award Winner)	Company Type	Energy Performance Ratings	Labels	Client Buildings with at Least a 10-point Energy Performance Improvement	Success Stories	Number of Clients who are Leaders
ABM Engineering Services	Engineering, Third Party Property Manager	53	24			1
Ameresco	Energy Service Company (ESCO), Project Developer	16				
Atlantic Energy Services, Inc.	Energy Management Services Company/Consultant	18				

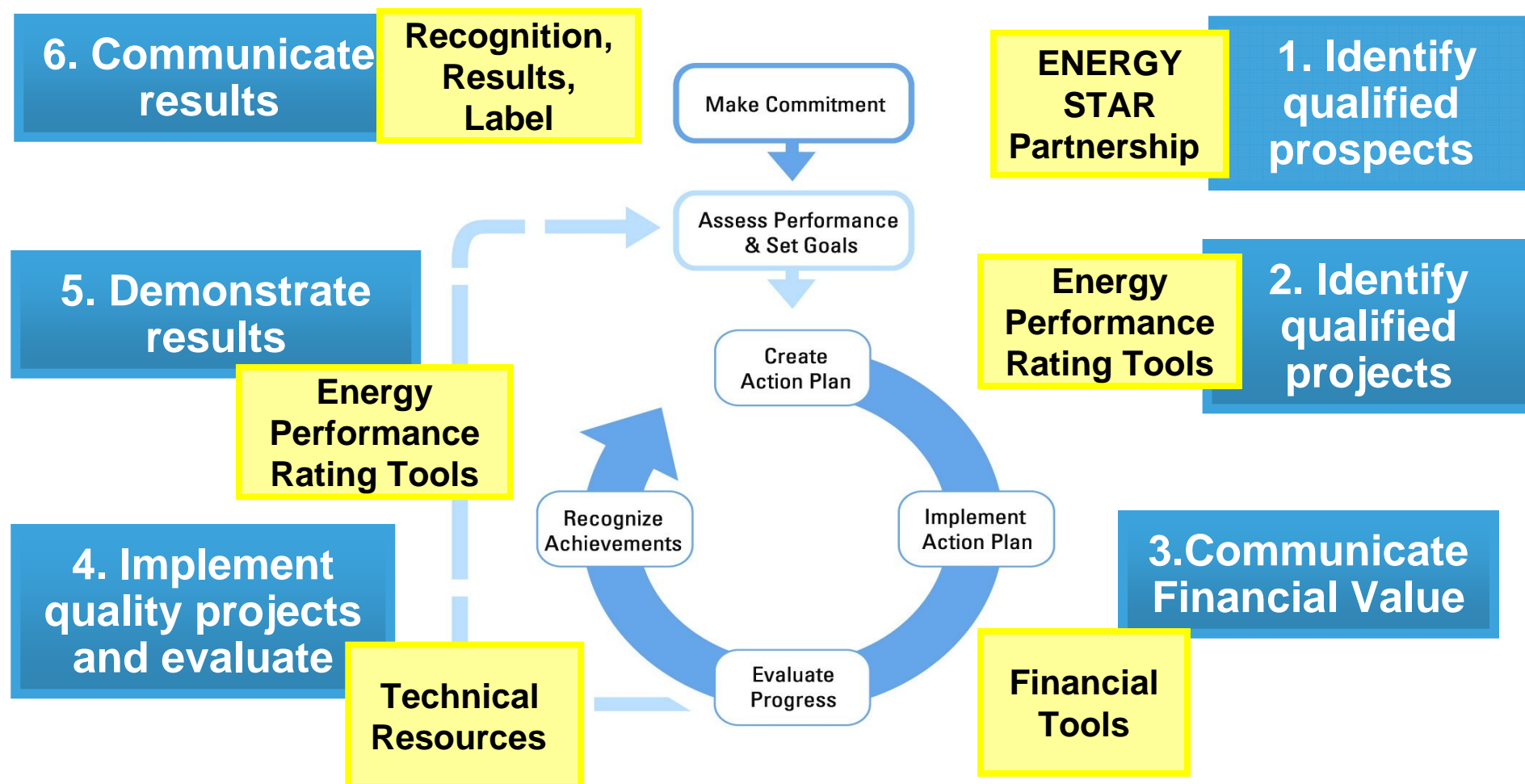
Use the “SPP Most Active” List to see which companies are doing the most for their clients through ENERGY STAR.

ENERGY STAR Guidelines for Energy Management

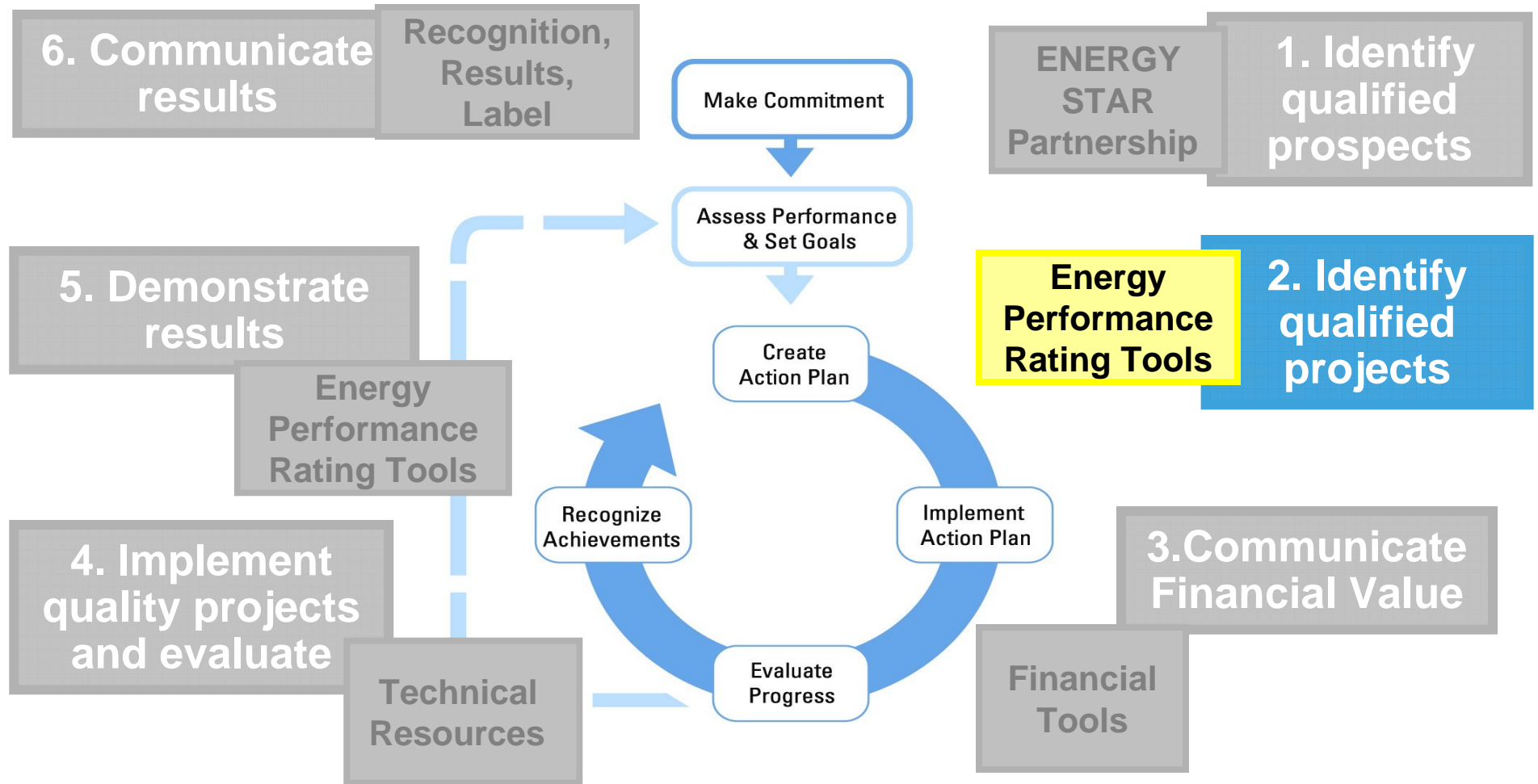


Based on the successful practices of ENERGY STAR Partners, EPA has identified the key components for a successful energy management program.

EPA Tools Support the Energy Management Process



Energy Performance Rating System



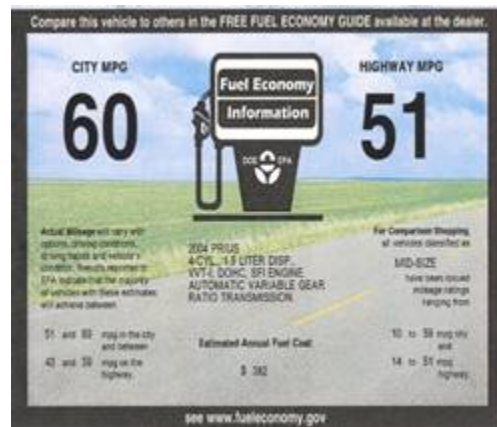
Energy Performance Rating System



Is 10 MPG high or low for an automobile?



Fuel
Efficiency
MPG



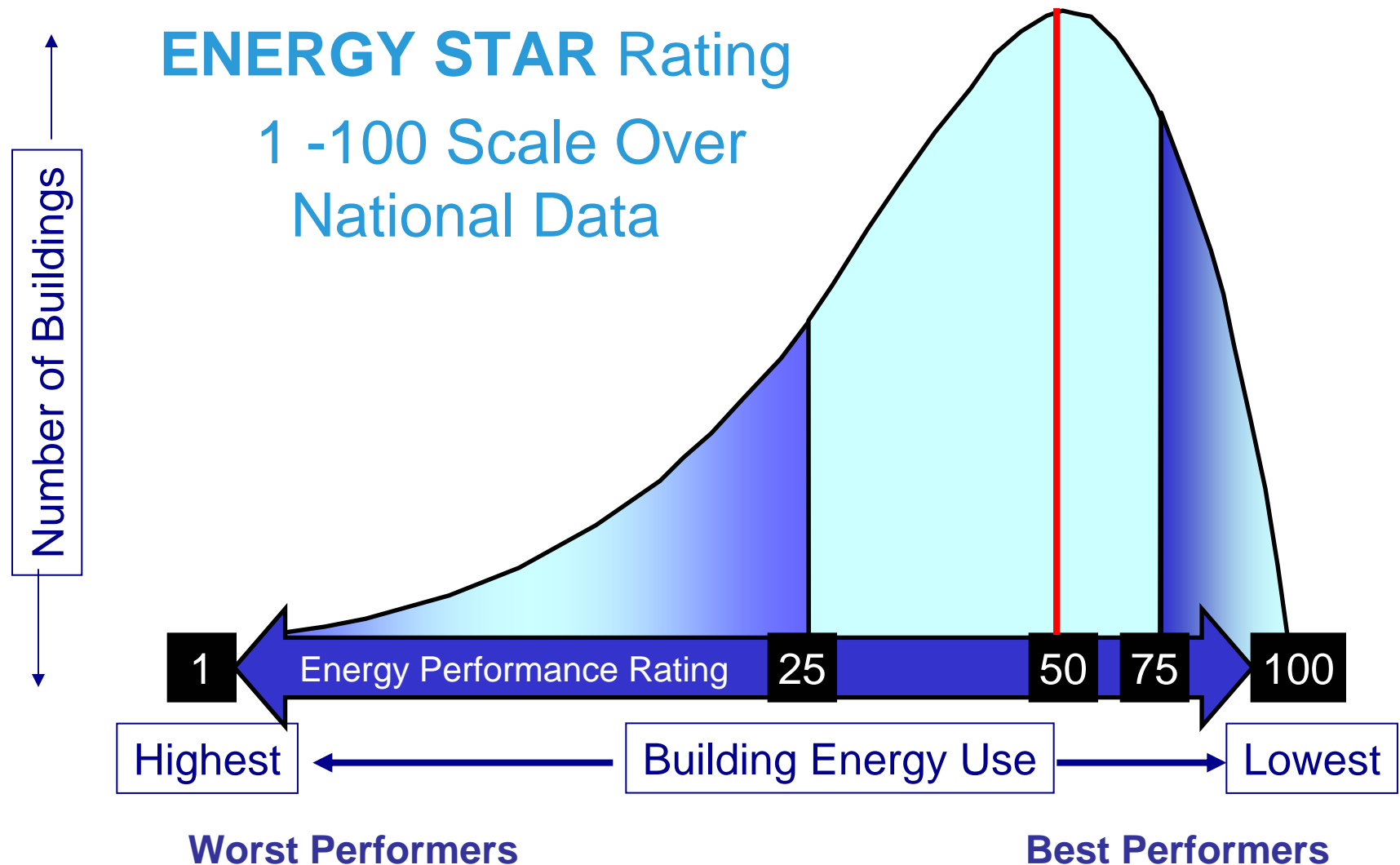
Is 80 kBtu/SF/YR high or low for a building?



Energy
Efficiency
1 - 100

STATEMENT OF ENERGY PERFORMANCE																																		
Sample Facility Building ID: 100000 For 12-month Period Ending: October 31, 2008 ¹ Date SEP form was completed: November 10, 2008																																		
Facility Being Rated Sample Facility 1234 Main Street Springfield, VA, 10000	Facility Owner Sample Owner 4567 Peach Ave. Springfield, VA, 10000 555-555-5555	Primary Contact for this Facility Jane Smith 7890 Columbia Way Springfield, VA, 10000 555-555-5555 jsmith@sample.com																																
Year Built: 1999 Gross Building Area (GBA): 20,000 Energy Performance Rating: ² (1-100): 80																																		
Facility Space Use Summary																																		
<table border="1"> <thead> <tr> <th>Space Type</th> <th>Area (SF)</th> <th>Occupants</th> <th>Operating Hours</th> <th>Number of PCs</th> </tr> </thead> <tbody> <tr> <td>Garage</td> <td>1,000</td> <td>2</td> <td>40</td> <td>0</td> </tr> <tr> <td>Office (General)</td> <td>19,000</td> <td>40</td> <td>40</td> <td>40</td> </tr> </tbody> </table>	Space Type	Area (SF)	Occupants	Operating Hours	Number of PCs	Garage	1,000	2	40	0	Office (General)	19,000	40	40	40	<table border="1"> <thead> <tr> <th>Site Energy Use Summary</th> <th>Electricity (kBtu)</th> <th>Natural Gas (kBtu)</th> <th>Total Energy (kBtu)</th> </tr> </thead> <tbody> <tr> <td>Electricity (kBtu)</td> <td>125,400</td> <td>125,400</td> <td>250,800</td> </tr> <tr> <td>Natural Gas (kBtu)</td> <td></td> <td>125,400</td> <td>250,800</td> </tr> <tr> <td>Total Energy (kBtu)</td> <td></td> <td></td> <td>250,800</td> </tr> </tbody> </table>			Site Energy Use Summary	Electricity (kBtu)	Natural Gas (kBtu)	Total Energy (kBtu)	Electricity (kBtu)	125,400	125,400	250,800	Natural Gas (kBtu)		125,400	250,800	Total Energy (kBtu)			250,800
Space Type	Area (SF)	Occupants	Operating Hours	Number of PCs																														
Garage	1,000	2	40	0																														
Office (General)	19,000	40	40	40																														
Site Energy Use Summary	Electricity (kBtu)	Natural Gas (kBtu)	Total Energy (kBtu)																															
Electricity (kBtu)	125,400	125,400	250,800																															
Natural Gas (kBtu)		125,400	250,800																															
Total Energy (kBtu)			250,800																															
Energy Intensity ³ Site (kBtu/SF/Yr): 6.3 Source (kBtu/SF/Yr): 10.5																																		
Exclusions (based on site energy use) CO ₂ (1000lb/yr): 265																																		
Professional Engineer Stamp (Seal of the Virginia Board of Professional Engineers) Professional Engineer Stamp Certified that the information contained within this document is accurate and conforms to the PE Standards.																																		
Indoor Environment Criteria ⁴ Indoor air pollutants controlled? Yes Adequate ventilation provided? Yes Thermal conditions met? Yes Adequate illumination provided? Yes																																		
Professional Engineer License Number: 0000001 State: VA John Doe 1234 Vineyard Lane Springfield, VA, 10000 555-555-7777																																		
<small>Notes:</small> 1. Application for the ENERGY STAR must be submitted to EPA within 4 months of the Period Ending date. Award of the ENERGY STAR is not final until awarded by EPA. 2. The EPA Energy Performance Rating is based on total source energy. A rating of 70 is the minimum to be eligible for the ENERGY STAR. 3. Indoor use values in units of volume (e.g., cubic feet) are converted to kBtu with adjustments made for conversion based on EPA's conversion factors. 4. Based on meeting minimum standards for indoor air quality. A standard document (EPA-600/4-90-010) for thermal comfort, and ASHRAE Lighting Handbook for lighting quality.																																		
Tracking Number: SEP0000010000001234																																		

Huge Variation in Energy Performance



Eligible Space Types



Supermarkets

Offices

general, courthouse,
bank branch, financial center

K-12 Schools

Hospitals

**Medical
Offices**

Hotels

**Residence
Halls/
Dormitories**

Warehouses



Basic Data Requirements



- **Location (Zip code)**
- **Gross floor area**
- **Twelve months of energy usage**
- **Weekly operating hours**
- **Number of occupants**
- **Number of personal computers**



** Data requirements may vary based on the building type*

Use the Rating to...



- Establish Portfolio Baseline
- Identify Opportunities for Improvement
- Set/Check Performance Goals Over Time
- Prioritize Investment Opportunities
- Document Results
- Receive Recognition

How to Access the Rating



- Single Building Manual Entry
 - Enter building and energy consumption information into Portfolio Manager.
- Excel Data Upload
 - Upload building data in Portfolio Manager using an Excel template.
- Automated Benchmarking Services
 - Use an ENERGY STAR Service and Product Provider to have the rating automatically integrated into your energy information and bill handling system for all buildings.



Automated Benchmarking Hosts



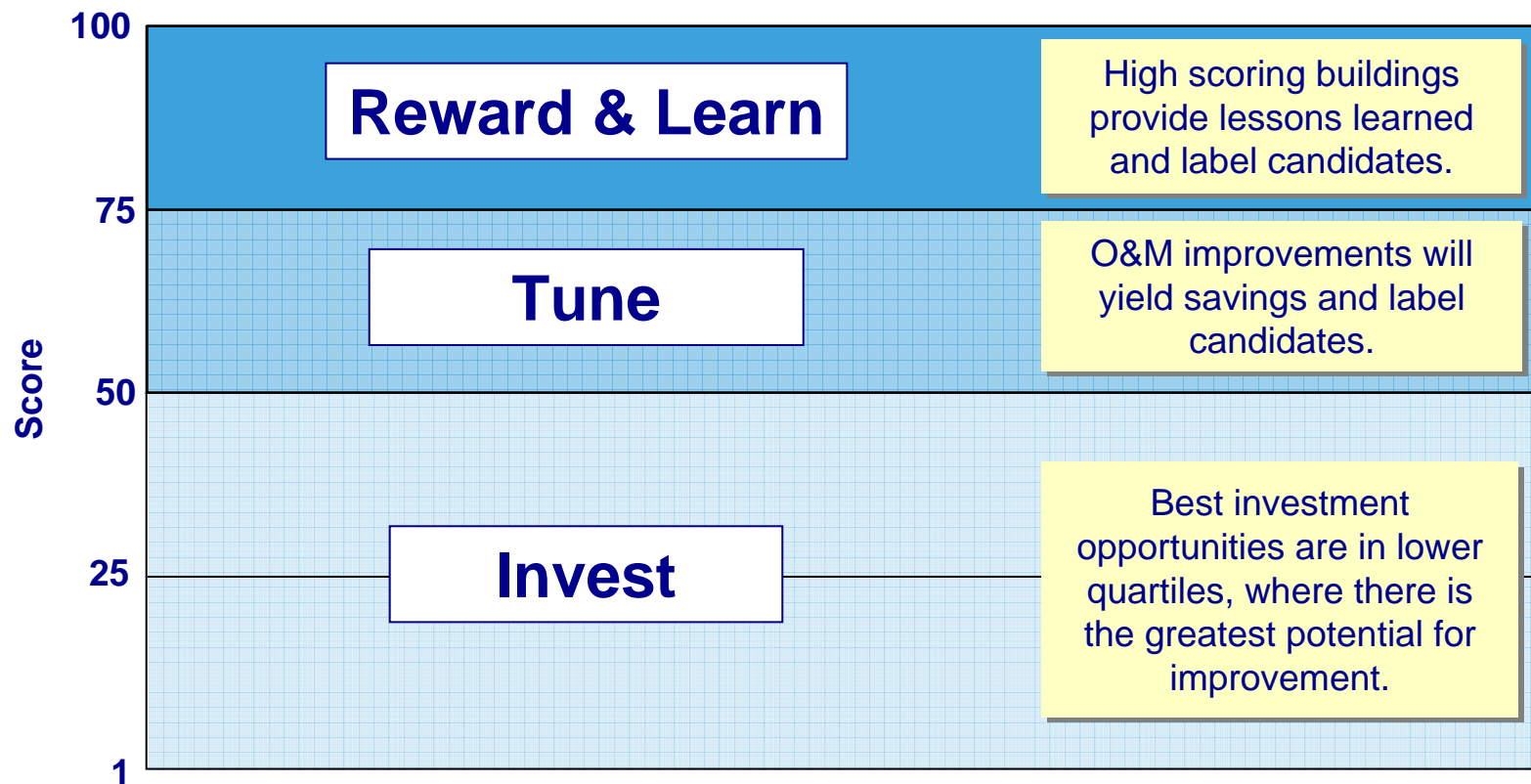
These companies have delivered thousands of automated ratings for customers



Energard® Technologies



Identify and Establish Priorities Across Portfolios



Market Indicators



- Over 32,000 buildings have received a rating in Portfolio Manager
 - 17% of the market
 - Over 5 billion square feet
- Over 3,400 labeled buildings
 - 8% of the market
 - Over 600 million square feet
- CoStar adds the ENERGY STAR rating for eligible properties in its database

Green and Energy Goals

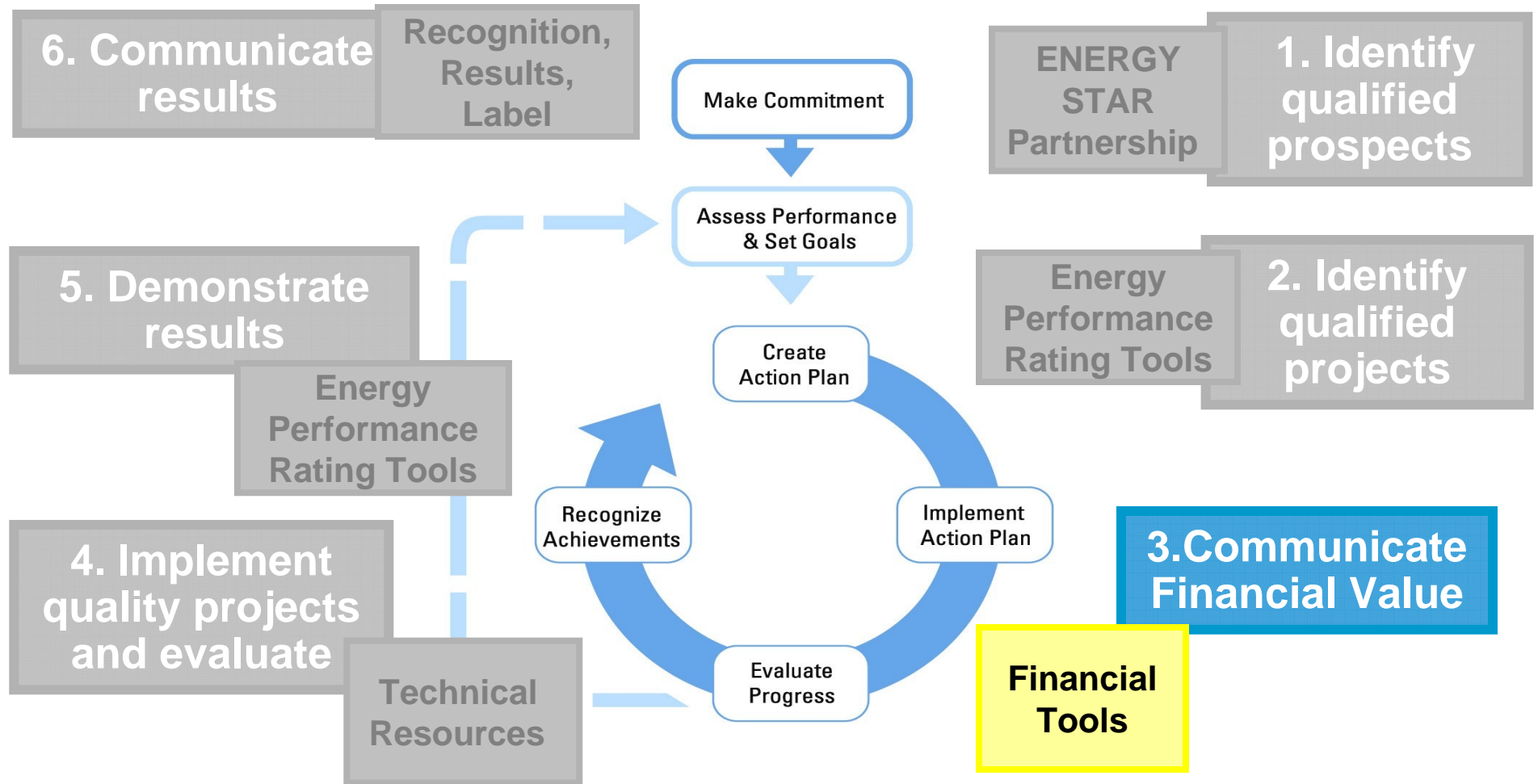


LEED-EB and EPA Energy Performance Rating

EPA Rating	LEED-EB Points	EPA Rating	LEED-EB Points
63	1	83	6
67	2	87	7
71	3	91	8
75	4	95	9
79	5	99	10

Prerequisite: ENERGY STAR Rating For LEED Certification – 67

Understanding Financial Value



Understanding Financial Value



- Building Upgrade Value Calculator
- Financial Value Calculator
- Cash Flow Opportunity Calculator
- Sector-specific Value Messages

Building Upgrade Value Calculator For Commercial Real Estate Properties



- Financial Impact of Proposed Investments, Including *Increased Asset Value*
- Impact of Proposed Changes on Rating
- Generates a Letter Highlighting Financial Value for Capital Investment Proposal

A screenshot of the "Building Upgrade Value Calculator" web application. The interface is divided into several sections: "Property Information", "Financial Information", "Energy Project Information", and a "Calculate" button. The "Property Information" section includes fields for Property Name, Square Footage, and Annual Utility Bill. The "Financial Information" section includes fields for Analysis Term (years), Discount Rate, Capitalization Rate, and a section for financing details like Loan Period, Number of Loan Payments, and Interest Rate. The "Energy Project Information" section contains a table of energy efficiency measures with their costs and annual savings. The "Calculate" button is located at the bottom right of the form.

Building Upgrade Value Calculator
For Office Properties
Version 1.0

Use Sample Data
Glossary
Print

The Building Upgrade Value Calculator allows practitioners to analyze the financial value of capital investments in energy efficiency measures in commercial real estate. Enter the inputs below and select the "Calculate" button to determine the investment's financial and energy benefits. This tool presents the results in two ways: a printable report that summarizes the financial and energy results, and a letter that you can modify and use to make a compelling business case to fund the investment.

Property Information

Property Name: Sample Office Building
Square Footage: 500,000
Annual Utility Bill: \$1,050,000

Financial Information

Analysis Term (years): 10
Discount Rate: 8%
Capitalization Rate: 8%

If Financing:
Loan Period (in years): 5
Number of Loan Payments (per year): 12
Interest Rate: 8%

Calculate **Clear**

Energy Project Information

Energy Efficiency Measure	Cost	Annual Savings
Variable speed drive on pumps & cooling towers	\$202,850	\$185,300
Garage lighting retrofits	\$97,275	\$90,400
Electronic ballasts & T-8's	\$253,050	\$192,500
VFD's on supply fans	\$126,960	\$75,500
1,000 surge protectors with motion sensors	\$92,750	\$21,000
Sub Total	\$873,885	\$474,700

Additional Annual Savings for Labor and Supplies: \$5,000

ENERGY STAR Rating: 55

Rebates (if any): \$52,000

Building Upgrade Value Calculator's Simple Approach



Inputs

- ✓ Annual Energy Cost
- ✓ Total Building SF
- ✓ List of Planned Efficiency Improvements
- ✓ Cost of improvements
- ✓ Projected Savings from Improvements
- ✓ Any Additional Savings
- ✓ Current ENERGY STAR Rating
- ✓ Applicable rebates

Output

- ✓ Impact on Asset Value
- ✓ Reduction in Operating Expense
- ✓ Estimated Energy Savings
- ✓ Payback Period
- ✓ Return on Investment (ROI)
- ✓ Net Present Value (NPV)
- ✓ Internal Rate of Return (IRR)

Financial Value Calculator



- Quantifies Increased Earnings Resulting from Improved Energy Efficiency
- Easy to Use Spreadsheet
- Useful for Specific Projects or Impact of Energy Management Across Portfolio

The screenshot shows the "Financial Value Calculator" interface within a Microsoft Excel spreadsheet. The title is "Calculate the Impact of Improved Energy Performance On Your Company's Financial Value".

Step 1 of 2: Choose your energy performance investment goal

Each option below will calculate the potential returns associated with improved energy performance. You can decide whether to define particular corporate investment rates or focus on building portfolio investment returns by choosing ONE of the options below.

Corporate Investment

Specify the return on investment (ROI) for your investment.

Initial Investment (\$):
Annual Energy Savings (\$):
Target Return Rate of Return (%)

Corporate Building Portfolio

Select the percentage of your building portfolio to upgrade: 10%

Specify your investment and savings values.
OR, choose a total investment and savings value.

Net Energy Investment (Costs) Initial Investment (\$):
Annual Energy Savings (\$): (Savings / Costs)

Step 2 of 2: Review your potential financial returns

ENERGY STAR shows that investing in energy performance can improve financial performance. For the scenario you created, your company could:

Add \$1,000,000 of net income to your bottom line.

Increase earnings per share by 0.5 cents, or roughly 5.32 percent.

Increase its market value by \$10.02 for each \$1.00 invested, for an overall increase of \$171,500,000.

Income Statement Impacts*

ABC Company	
Energy Cost Savings	\$ 12,000,000
Expenses	
Depreciation (ignoring savings value)	\$ 1,000,000
Interest Payments	Need Info
Total Expenses	\$ 1,000,000
Income Before Taxes	\$ 10,000,000
Income Taxes	\$ 1,000,000
Increased Net Income	\$ 9,000,000

Financial Summary*

Initial Investment	\$ 10,000,000
Net Income	\$ 9,000,000

Financial Value Calculator's Simple Approach



Inputs

- ✓ Annual Energy Cost
- ✓ Total Portfolio SF
- ✓ Initial Investment
- ✓ Annual Energy Savings

Optional Inputs:

- ✓ P/E Ratio
- ✓ Earnings per Share
- ✓ Outstanding Common Shares

Output

- ✓ Net Present Value
- ✓ Internal Rate of Return
- ✓ Increased EPS
- ✓ Shareholder Value
- ✓ Payback Period

Cash Flow Opportunity Calculator



- Estimates how much new equipment or services can be purchased and financed by the anticipated savings cash flow

FIRST APPROXIMATION DATA ENTRY TABLE

Name:

Select Scenario:

Sample Values:

	SF	Annual Energy Costs (\$) - All Fuel Types	\$/SF	Savings Target (%)	Potential Annual Savings	Buildings cost
Group A	0	0	0.00	0.0	\$0	LESS than \$100 /SF to operate
Group B	0	0	0.00	0.0	\$0	MORE than \$100 /SF to operate
Total	0	0	0.00	0.00%	0	

ENERGY STAR® does not guarantee that your project will generate the results presented herein. An investment grade audit performed by a qualified engineering organization is required to determine the actual size of your savings opportunity.

- Compares the costs/benefits of financing the project now vs. later

FIRST APPROXIMATION INVESTMENT OPPORTUNITY

	Group A	Group B	Total Utility Bill
Annual Utility Bills	\$0	\$0	\$0
Annual Potential Savings	\$0	\$0	\$0

Potential Annual Savings = Cash Flow Opportunity

What Can This Annual Cash Flow Buy?

Assuming an interest rate of %

Assuming a term of Year(s)

Savings used to pay energy investments %

Taken from operating funds, these savings could finance energy projects equal to:

Contribution that your operating budget can make towards energy improvements \$/SF

Simple Payback Year(s)

Month(s)

without increasing today's capital and operating budgets.

Median project investment ranges between \$1 - 3¢/sf*

Consider blending short- and long-term projects to maximize use of the savings.

*Market Trends in the U.S. 2000 Industry Results from the NAEES 2000 Database. Project Grouping: Process, HVAC, Controls, and other. May 2002

[Important Notice](#)

Building Upgrade Manual



Third-Party Resource to Validate Your Customer Recommendations

- Existing Building Commissioning
- Lighting
- Supplementary Load Reduction
- Fan/Motor System Upgrades
- Heating/Cooling system upgrades



Technology Alone \neq Superior Performance



Improper installation and poor maintenance of high technology items can result in poor performing buildings.

For example:

60% of building fan systems are oversized by an average 60%

(EPA fan study)



ENERGY STAR Partner Experience



For the average building, partners find that performance improvements of 10% to 20% are achieved through revisions to management strategies, operations, or investments with rates of return of less than 18 months.



ENERGY STAR Recognition

Building Level Recognition



- **ENERGY STAR** Label for Existing Buildings
- “Designed To Earn the **ENERGY STAR**” New Building Design)



EPA Recognition Organization Level



ENERGY STAR Challenge

An initiative launched by
U.S. EPA for building
owners across the country
to improve the efficiency
of their buildings by 10%
or more



EPA Recognition Organization Level



The **ENERGY STAR**
Partner of the Year
Award can be achieved
by organizations for
outstanding contributions
to reducing greenhouse
gas emissions through
energy efficiency



Partner of the Year Awards



ENERGY STAR Resources



- Free Training
- ENERGY STAR benchmarking tools
- Calculators
- Manuals
- Software
- Purchasing and Procurement Tools
- Monitor and computer power management
- Utility companies use ENERGY STAR in many energy efficiency incentive programs
- Recognition: ENERGY STAR label, Leaders, Partner of the Year, media, promotional materials

ENERGY STAR Online Trainings



ENERGY STAR offers free online training on the following topics to help organizations leverage ENERGY STAR and improve their energy performance

Introduction to ENERGY STAR

Creating Action Plans

Assessing Performance

Financing Strategies

No travel and no time out of the office



Success Stories

Food Lion and Advantage IQ



- **Client Goal:**
 - Track Energy Performance of 1200 Stores (42 million SF)
 - Identify savings from Lighting, Refrigeration, HVAC Upgrades
 - Identify/Prioritize Other Areas for Improvement
- **SPP Solution:**
 - Energy Tracking and Monitoring Software
 - Improved Consumption Tracking, Forecasting, Budgeting
 - Automated Benchmarking Through ENERGY STAR Energy Performance Rating System
- **Client Outcomes:**
 - \$105 million saved
 - 1.5 billion lbs of CO₂ emissions avoided over 5 years
 - 400 ENERGY STAR Labels as of October 2005
 - ENERGY STAR Partner of the Year: 2002, 2003
 - ENERGY STAR Sustained Excellence award: 2004, 200



Gresham-Barlow School District and Save More Resources



- **Client Goal:** Improve Resource Conservation Practices
- **SPP Solution:**
 - Utility Management Software
 - Improved Consumption Tracking, Forecasting, & Budgeting
 - Automated Benchmarking Using ENERGY STAR Energy Performance Rating System
 - Identification of Other Areas for Improvement/investment
- **Client Outcomes:**
 - 46% Overall Energy Reduction
 - \$4.2 Million in Cumulative Savings
 - ENERGY STAR Leader in 2005
 - Gresham-Barlow *and* SMR Recognized as ENERGY STAR Partners of the Year in 2006



The Ritz-Carlton Boston and Servidyne



- **Client Goal:** Improve HVAC/Lighting System Energy Performance
- **SPP Solution:**
 - Energy Audit
 - Quantified Potential Savings from Retro-commissioning and Capital Projects
 - Tracked Energy Consumption to Verify Improvements and Identify New Areas For Attention
- **Client Outcomes:**
 - Saved \$92,800 in One Year Through O&M Improvements With No Capital Expenditure



Arden Realty and *next>edge*



- **Client Goal:** Upgrade energy performance of building systems through major investment
- **SPP Solution:**
 - Chiller/Cooling Tower Replacement
 - Installation of VSDs
 - Lighting Upgrade (T-12 to T-8)
 - Energy Management System
 - Cogeneration Plant
 - Commissioning
- **Investment:**
 - \$1.8 million, minus \$750,000 Incentives
- **Client Outcomes:**
 - \$310,000 Energy Savings Per Year
 - Reduced Electricity Costs from \$2.47/SF to \$1.63/SF
 - 3.7 Year Payback (27% ROI)



St. Michael's Hospital and Johnson Controls



- **Client Goals:**
 - Improve Environment of Care for Patients/Staff
 - Demonstrate Continuous Improvement
- **SPP Solution:**
 - Predictive/Proactive HVAC Maintenance
 - Facility Management and Control Systems Optimization
 - Energy Consumption Benchmarking
- **Client Outcomes:**
 - Projected savings > \$1.1 million in Utility/Operational Costs
 - Improved system O&M Procedures = Better Environment for Patient Care
 - Better Prepared for Utility Deregulation

For More Information Contact:



- **ENERGY STAR Support**
 - Bob Sauchelli, US EPA
sauchelli.robert@epa.gov
 - Audrie Washington
washington.audrie@epa.gov
 - Tyrone Foster, SENTECH, Inc.
tfoster@sentech.org
- **ENERGY STAR Web site**
 - www.energystar.gov
- **ENERGY STAR Hotline**
 - (888) STAR-YES