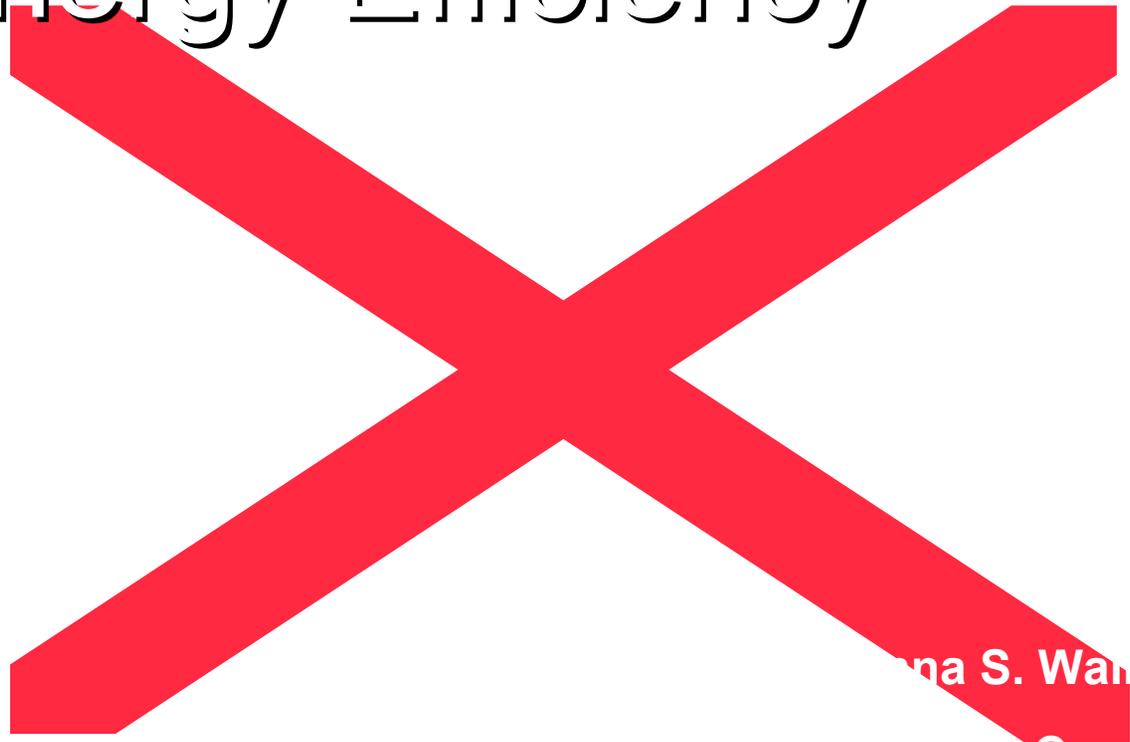


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# Making the Business Case for Energy Efficiency



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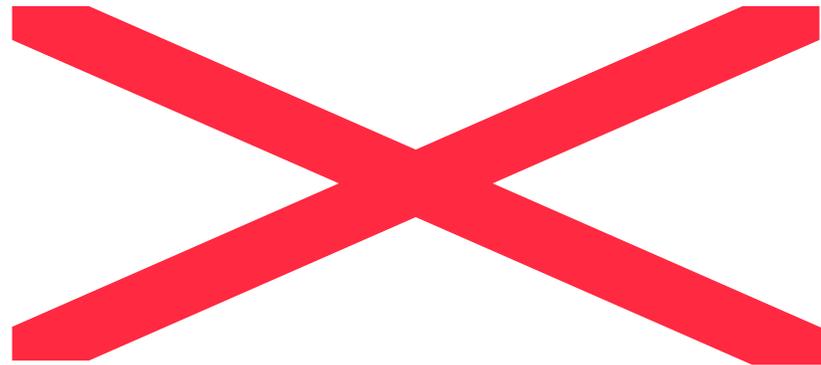


# Agenda

- Why is Energy so Important?
- How to Make the Business Case for Energy Efficiency?
- Success Stories
- How to Partner to Improve Energy Results
- Resources
- Summary



# Why is Energy So Important



TOTAL OPERATING COSTS

DATA from BOMA 2004 Experience Exchange Report



# USAA Real Estate Company – Why am I here to talk to you?

- We have a portfolio of approximately 35 million square feet that includes office, industrial, retail, and hotel properties
- Our energy initiatives **saved \$8 million in past four years**
- **Saved 85,008,219 kBtu's** of annual consumption, which is **equivalent to 37 million pounds of carbon dioxide eliminated**, or 3737 cars removed from the roadways, **or 5,119 acres of trees planted**
- In 2005 & 2006, **one of only 2 real estate companies to receive Energy Star Partner of the Year recognition** - for "Sustained Excellence in Energy Management"
- We have a **strong commitment to customer service, operational excellence and environmental stewardship**



# How to Make the Business Case for Energy Efforts

- Executive leadership commitment
- Began by developing a strategic energy plan
- Benchmark – to assess and measure performance
- Audit – assess baseline and prioritize where to begin
- Look at new construction & remodels as an opportunity
- Work with service provider partners & utilities to drive energy performance



## How to Make the Business Case for Energy Efforts

- Understand what your company's **key performance goals** are
- **Present changes, investments, training in terms of organizational goals** – speak in terms of employee comfort, return on investment, cost reductions, payback and environmental & climate achievements
- Remember, most executives **need to understand both financial, environmental as well as tenant or employee comfort/satisfaction benefits** to make an informed decision and support these kinds of efforts



## How Can You Partner to Improve Results

**Learn to look at energy differently** – not just in terms of total costs or costs vs. budget – but rather in terms of consumption, **EPA's Energy Performance Rating**, employee comfort, system reliability, system life cycles, and cost savings, NOI increase, return on investment



# National Energy Performance Rating

Is 10 MPG high or low for an automobile?



Fuel  
Efficiency  
MPG



Is \$2/SF/Year energy cost high or low for a building?



Energy  
Efficiency  
Rating  
1 - 100





# Statement of Energy Performance

**STATEMENT OF ENERGY PERFORMANCE**  
Building Name Here - 2-11-1999

**BUILDING**  
Building Name  
Street Address  
City, ST Zipcode  
Owner Building Area (SF)  
Construction

**BUILDING OWNER**  
Name, Street Address  
City, ST Zipcode  
Contact Name  
Phone, Email

**BUILDING SPACE USE SUMMARY**  
Area (SF)    Occupants    Operation (Days/Week)    Computer

**OTHER:**  
DATA CENTER  
GARAGE

**UTILITY USE SUMMARY**  
Vapor Source (kWh)  
Electricity (kWh)    Natural Gas (kWh)    Oil (kWh)    Propane (kWh)    District Heat (kWh)    Total Utility (kWh)

**ENERGY STAR BENCHMARKING ASSESSMENT**

This building qualifies for the ENERGY STAR Label for Buildings.

BENCHMARKING SCORE	ENERGY STAR TARGET	YOUR BUILDING	PER CENT	PROFESSIONAL VERIFICATION
	75	60	80%	
ENERGY USE:				
SITE:				
SOURCE:				
POLLUTION:				Professional Engineer Stamp
CO <sub>2</sub>				
SO <sub>2</sub>				
NO <sub>x</sub>				
ENERGY COST:				

**INDOOR ENVIRONMENT CRITERIA:**  
INDOOR AIR POLLUTANTS CONTROLLED?  
ADEQUATE VENTILATION PROVIDED?  
THERMAL COMFORT MET?  
ADEQUATE ILLUMINATION PROVIDED?

*Based on the conditions observed at the time of my visit to this building I certify that this statement is accurate.*

Normalized Benchmark Data

ENERGY STAR

Your Bldg.

Energy Performance Rating:

75

60

Energy Consumption: (kBtu/ft<sup>2</sup>-yr):

95

123

Energy Costs/SF/YR:

\$1.75

\$2.50

Emissions:

CO<sub>2</sub> (1000 lbs/yr):

5,465

7,100

SO<sub>2</sub> (1000 lbs/yr):

23

30

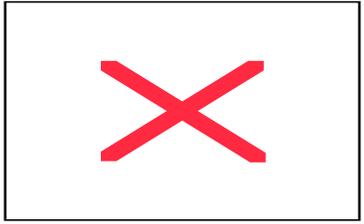
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140



## How Can You Partner to Improve Results

- Work with service provider partners that have additional expertise and want to help
- BOMA has developed the **BOMA Energy Efficiency Program** that will provide best practices and educational training on specific ways to enhance energy performance



# How Can You Partner to Improve Results

## **BOMA Energy Efficiency Program (BEEP) Overview**

Six web-assisted audio seminars:

- Introduction to Energy Performance
- How to Benchmark Energy Performance
- Energy Audit Concepts & Economic Benefits
- No- and Low-Cost Adjustments to Improve Energy Performance
- Valuing Energy Enhancement Projects & Financial Returns
- Building an Energy Awareness Program

BOMA Energy Efficiency Program – National Roll this year



# Available Resources

- ENERGY STAR – become an ENERGY STAR Partner and learn about the available tools, including the Energy Performance Rating benchmarking tool – **[www.energystar.gov](http://www.energystar.gov)**
- Work with utilities & service provider partners – make sure they understand goals & ask for them to provide support
- **BOMA's Energy Efficiency Program** – will provide training and additional resources – **[www.boma.org/aboutboma/BEEP](http://www.boma.org/aboutboma/BEEP)**



# Success Story

## Downtown High-rise

- **61% increase in annual energy costs within one year due to electricity rate increases**
- Benchmarked, audited and then made recommendations for improvements Retrofits Recommended –
  - Variable Speed Drives on building chillers \$109,600
  - Lighting retrofit & Motion Sensors \$100,300
- Rebates - \$49,010 from local utility & \$22,750 State of California
- Emissions reductions - (497,069 kWh) – 745,604 lbs of CO<sub>2</sub>, 1,242,673 grams of NO<sub>x</sub> or the equivalent of planting 102 acres of trees
- **Annual Savings - \$153,670 – Less than 1 year payback, and 104% ROI (return on investment)**



## Success Story - Suburban Office

- Lighting Retrofit - \$106,000
- Rebates - \$41,632 from local utility and \$57,000 from State of California's 20/20 program
- **Total out of pocket expense after rebates \$8,000**
- Annual energy savings \$67,000
- Payback in less than 2 months
- When we sold this property, our brokers were able to garner an additional **\$1.5 million in value due to these efforts**



## Success Story – Historical Building

- Benchmarked **in 2002, scoring a 59 on Energy Star's Energy Performance Rating**
- Audit showed equipment was running longer at night than it should.
- Inspected the property after hours – didn't just rely on EMS.
- **Saturday cooling "on demand"** instead of "automatically providing" to a mostly unoccupied property
- **15% reduction in energy consumption – with very little monies expended**
- Reduced tenant operating expenses by 61 cents per square foot per year.
- **Energy Star Labeled building with a Rating today is an 80 – 36% improvement**



# Summary & Conclusions

- Identify organizational goals & how energy efficiency/environmental stewardship fit
- Develop a strategic plan
- Assess where you are today – Benchmarking & Audits
- Look for leveraging of partnerships
- **Take advantage of all training opportunities**
- Remember continuous improvement – process is on going
- **Continue to measure and report your results – results sell change**



# BOMA Energy Efficiency Program

*You can* improve company financial performance, improve employee comfort & productivity, while also reducing atmospheric pollution

*You have an opportunity* to demonstrate environmental leadership to your employees, industry, and other stakeholders through improved energy efficiency in the buildings you occupy, operate and own



# Questions