

Welcome to CHA's Webinar: Energy and Catholic Health Care



October 8, 2009



Our Faculty



Sr. Susanne M. Hartung, SP

Chief Mission Integration Officer

Providence Health and Services, Washington and Montana Regions

Richard Beam, MBA

Director of Energy Management

Office of Supply Chain Management

Providence Health & Services

Clark Reed

Director of Healthcare Facilities Division, ENERGY STAR

U.S. Environmental Protection Agency (EPA)

Reflection



Creator God, we can choose to live differently! Inspire us as we make choices so that we will recognize the impact our lives have on our environment and our human family around the globe.

We pray to the Lord: **Lord, help to reclaim the future!**

Let us who have a keen dedication and awareness of your creation and all that it brings to the human family, have courage and conviction that we are able to contribute to the sustainability of the Earth. You who are our Provident God, let your Providence lead the way in our Health and Services.

Pour out your blessing upon us today. May each of our actions reveal our awareness that we are partners with You in the creation and sustainability of this earth that you have given to us to appreciate and enjoy. We ask this in the name of your Son.

Amen

Energy and Catholic Health Care

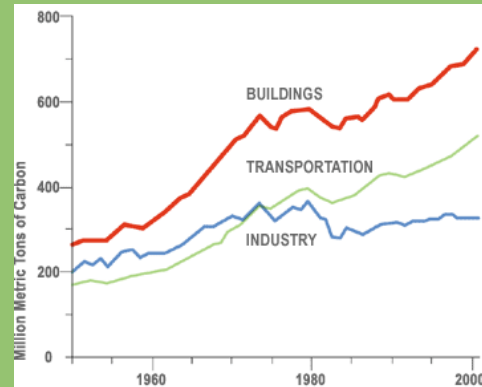


Providence Health & Services

US Energy Use by Sector

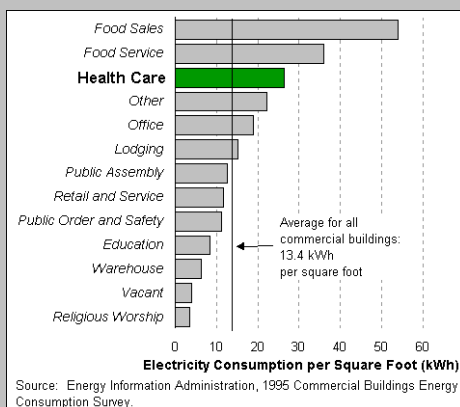


STATE OF THE INDUSTRY



U.S. CO₂ Emissions by Sector

US Hospitals Energy Use



Average healthcare facility uses 2.7 times energy per sq.ft. as average commercial office building.

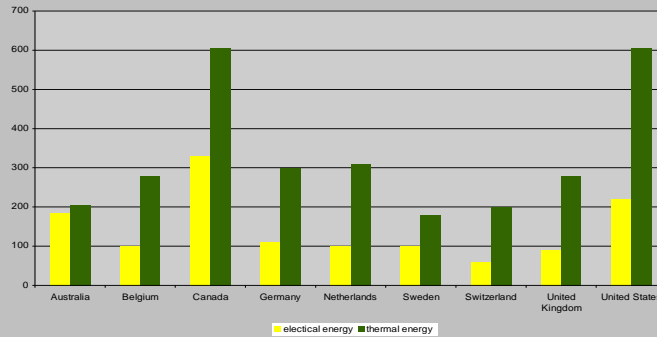
According to US DOE, average 240,400 Btu/sf/yr costing \$2.26/sf/yr.

Acute care hospitals average 330,000 Btu/sf/yr, costing \$3.00/sf/yr.

Providence Corporate Goal - <200,000 Btu/sf/yr.



Healthcare Facility Energy Intensity



Values driven approach



- Respect
- Compassion
- Justice
- Excellence
- Stewardship





Catholic Health Care Heritage

"We view natural resources as an occasion to praise God's Providence, and we promote the responsible use of goods that belong to all humanity."



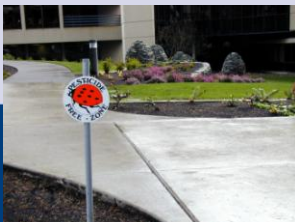
Sisters of Providence
Constitution and Rules, 1980



PH&S Core Value: Stewardship

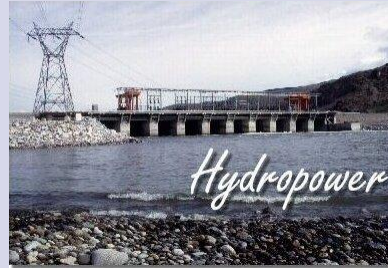
The earth is the Lord's and all that is in it (Psalm 24:1)

We believe that everything entrusted to us is for the common good. We strive to care wisely for our people, our resources and our earth. We seek simplicity in our lives and in our work.





How You Create the Culture Within...



"More Smolts, Less Volts"

Steelhead Habitat Smolt Capacity & Returning Adults (13% marine survival)

CEO's Create Culture



\$4,084,078 Energy Savings
47,891,661 CO2 Elimination
(2,474,199 Gallons of Gasoline)



Facilities Control \$100 Million Annual Spend

What Does It Mean ...



Financial
success



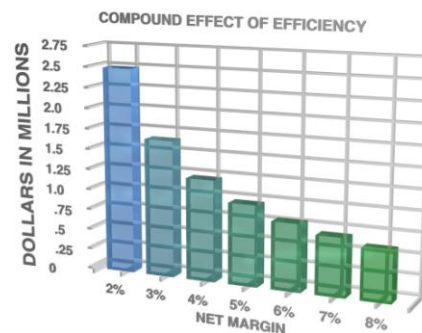
Healthy
environments
for healing



Moral
Responsibility

Financial Success – Value of Energy \$

**At 6% NOI
\$1 Energy
Savings
Equals
\$16.67
Revenue**



Financial Success



- 6% NOI
- 2007 - \$4,084,078
Energy Savings
- \$68,081,580
Revenue Equivalent
- 1995 – Year to Date
\$23,782,990 Energy
Savings

**\$396,462,443 Revenue
Equivalent**



Providence Newberg Medical Center The Nation's Greenest Hospital



**Socially & Environmentally Responsible –
Guinness To Green
Providence Newberg Medical Center**



Construction statistics



- 138,000 gsf acute care hospital, 40 beds
- 45,000 gsf medical office building
- \$49.3 million construction cost
- \$70.6 million total project cost
- \$385 per gsf



Financial



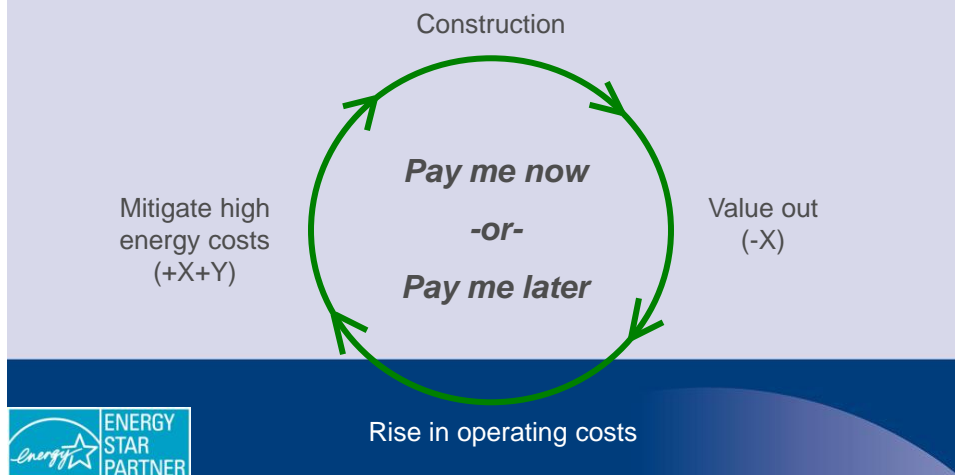
- < 1.4% cost impact to achieve LEED Gold
 - LEED costs \$690,200
 - Oregon energy tax credits \$214,345
 - Energy & sustainability grants \$277,040
 - Net incremental cost \$198,615
- Annual energy savings \$178,753
- Return on investment: 14 months



First Cost Syndrome Life cycle cost benefit



Economic time horizon — “cradle to cradle”



Benefit to the Community



- Employee and patient satisfaction
 - High Press Ganey scores
 - “New standard in healthcare facilities”
UC Berkeley CBE
- Lower impact on community infrastructure
- Community Pride



Environmental



- Lowered carbon footprint by 35%
- Reduced storm water run-off to city by 50%
- Improved indoor air quality from 100% outside air



Additional Benefits

- Increased asset value
- Demonstrates a commitment to environmental stewardship and social responsibility
- Reduces harmful greenhouse gas emissions
- Healthier and safer for occupants



Action in Environmental Health

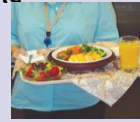
- Toxicity Reduction in Purchasing
- Safer Materials
- Greener Cleaners
- Less toxic sterilants and disinfectants
- Improved engineering controls and training
- DEHP Free Medical Devices



Green Operations - Material Control



- Waste prevention and Environmentally Preferable Purchasing
- Waste/Material Data Collection
- HIPAA/Confidential Paper mgmt
- Red bag waste minimization, nonincineration treatment
- Reusable Sharps Containers
- Fluid Management Systems
- Recycling programs
- Single-Use Device Reprocessing
- Universal waste recycling
- Food Composting/Regional Food Sourcing
- Reusables - food serviceware, underpads, toters



25

Waste Data Control – Wheaton Franciscan



- Data Collection and reporting for multiple sites to one central location.
- Identification of \$600,000 in savings for the system due to red bag reduction, recycling and consolidation of vendors.
- Mercury elimination
- Identified potential for recycling, vendor standardization, improved RMW segregation and a system approach to pharmaceutical waste management.
- Use of GGHC for continuous improvement





Operating Room Waste Reduction

- Boulder Community Hospital saved \$300,000 per year through blue wrap prevention – switched to reusable containers.
- Installation of suction canister evacuation system



EPP – Environmentally Preferred Purchasing



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(415) 438-5724 facsimile

FOR IMMEDIATE RELEASE

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(415) 438-5524

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(610) 997-4856

CHW SWITCHES TO PVC/DEHP-FREE PRODUCTS TO IMPROVE PATIENT SAFETY AND PROTECT THE ENVIRONMENT

Healthcare Provider Awards \$70 Million Contract to B. Braun for PVC/DEHP-Free Supplies

San Francisco, Calif., November 21, 2005 – Catholic Healthcare West (CHW) announced today that it has awarded a five-year, \$70 million contract to B. Braun Medical Inc. for the supply of polyvinyl chloride (PVC)/ di-2-ethylhexyl phthalate (DEHP)-free intravenous (IV) bags, solutions, and tubing to the system's 40 hospitals in California, Arizona, and Nevada.

The contract award represents a significant victory in CHW's ongoing advocacy efforts with suppliers to ensure that products used in the hospital setting are safe for patients, employees, and the environment. CHW is the first major integrated delivery network to take such a strong position on the use of PVC/DEHP-free products.

Commitment to Health



Owner

“Providence Health & Services has two patients: the medical patient and the earth. To heal one without the other will not last.” –Janine Benyus

Author of the book, *Biomimicry – Innovation Inspired by Nature*, in conversation with Richard Beam at the 2005 Inland NW Sustainability Conference, Boise, Idaho



Questions?



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*ENERGY STAR for Healthcare:
EPA's energy conservation program for
healthcare organizations*

Catholic Healthcare Association webinar
October 8, 2009

Clark Reed
U.S. Environmental Protection Agency



Learn more at energystar.gov

Today's Agenda

- Brief Overview of ENERGY STAR®
- Benchmark Energy Performance with Portfolio Manager
- ENERGY STAR campaigns

Polling Question:

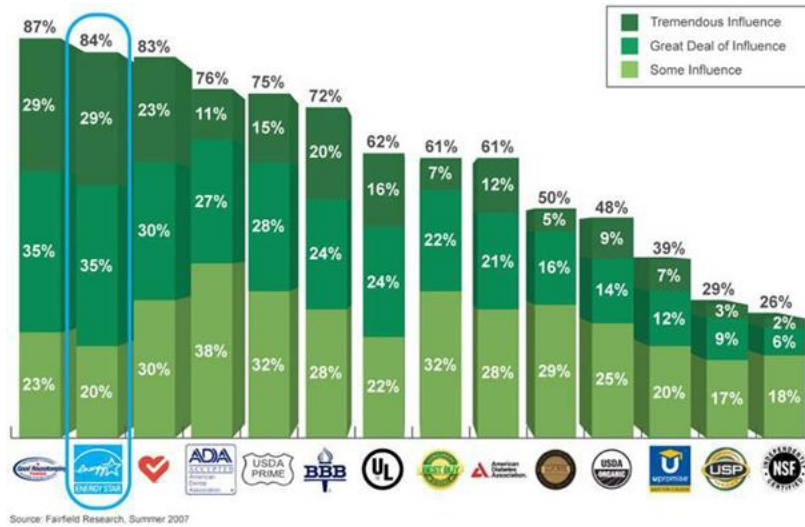
How is most electricity in the US generated? Is it...

- a. Burning coal, oil, and wood
- b. Nuclear power
- c. Solar energy
- d. Hydro-electric power plants

ENERGY STAR Program Overview

www.energystar.gov

ENERGY STAR is a Trusted Brand



ENERGY STAR



Also ENERGY STAR



AEGON Center
Louisville, KY



St. Francis Hospital &
Health Services
Marysville, Missouri



500 Boylston St.
Boston, MA



Hillsborough County Water
Department Administration
Building
Hillsborough County, FL



Westin San Francisco
Airport
Millbrae, CA



Twin Peaks Charter
Academy
Longmont, CO



Blue Earth County Courthouse
Mankato, MN

Energy Star provides energy efficient solutions to organizations

Hospitals



Medical
Office Buildings

Retail



Waste Water
Treatment Plants

Office Buildings



Courthouses

Hotels



Financial Centers



Warehouses



Dormitories



Supermarkets



Schools

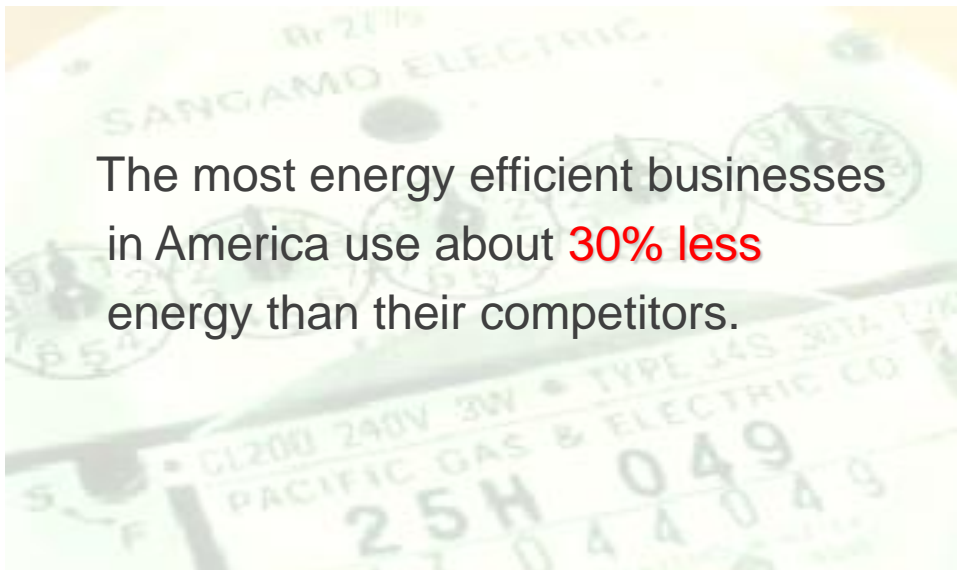


ENERGY STAR Healthcare Partners



Energy is not a Fixed Cost of Business

The most energy efficient businesses
in America use about **30% less**
energy than their competitors.



Financial Savings



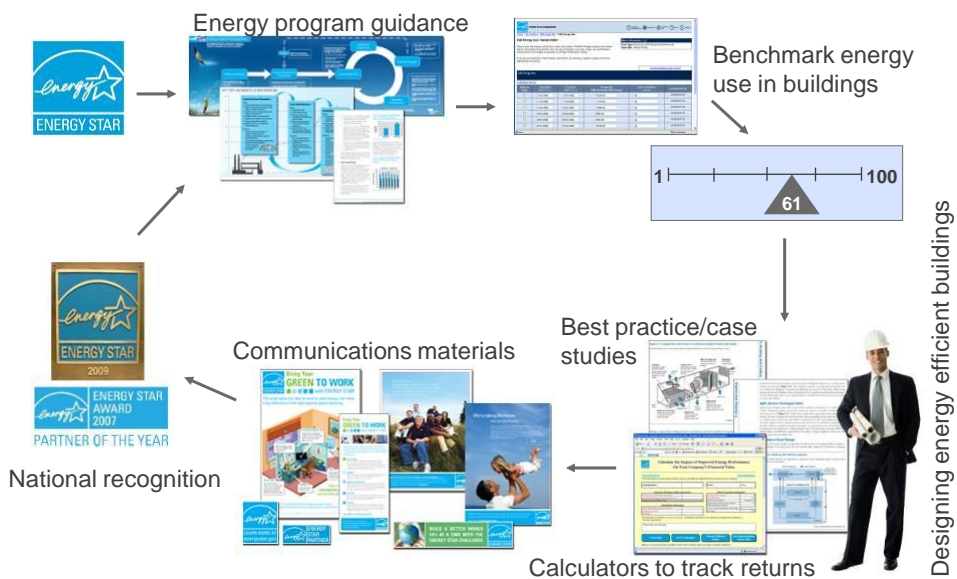
Healthcare

\$1 saved on **energy costs** has the equivalent impact on the bottom line as:

- increasing revenues by \$20 in hospitals
- increasing revenues by \$10 in MOBs

*Assuming a 5% profit margin and a ratio of 80/20 fixed/variable costs

Climate Protection Resources



Portfolio Manager: EPA's Energy Performance Rating System

Assess Performance

Is 10 MPG high or low for an automobile?



**Fuel
Efficiency
MPG**



Is 550 kBtu/SF/YR high or low for an acute care hospital?



**Energy
Efficiency
Rating
1 - 100**



Portfolio Manager Attributes

Track performance

Energy & water meters for a single facility
Review historical data or before/after major upgrades or O&M

Weather normalized

Source energy and energy intensity (EUI)

Compare

Average EUI for your space category to your performance over time
Group similar buildings together for benchmarking comparison

View percent improvement

Verify and track results (\$\$ and CO₂)

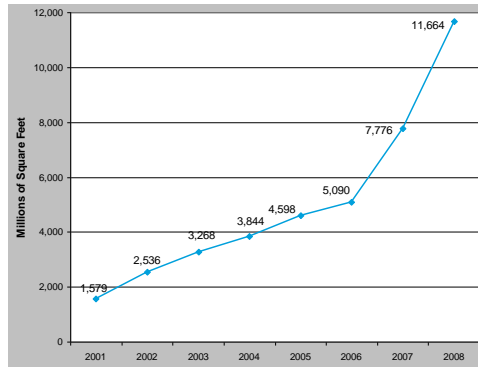
Eligible for ENERGY STAR rating



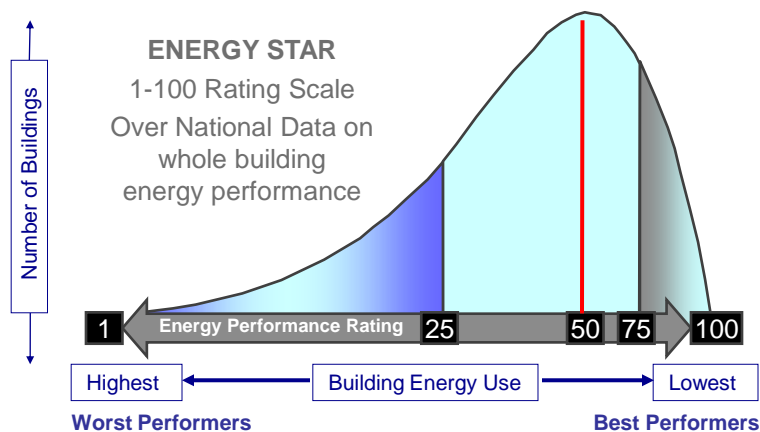
Market Penetration

More than **90,000** buildings have measured energy use in Portfolio Manager

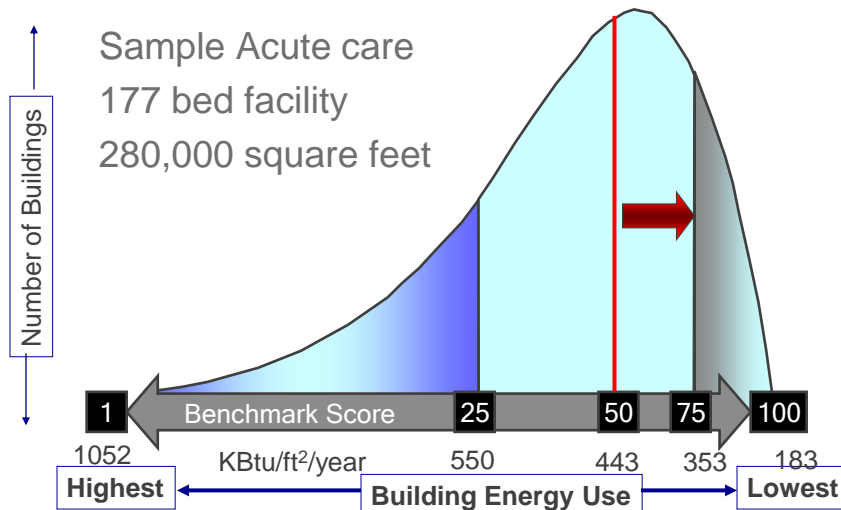
- Greater than 12.5 billion square feet
- 17% of commercial buildings market
- 76% of the acute care hospital market



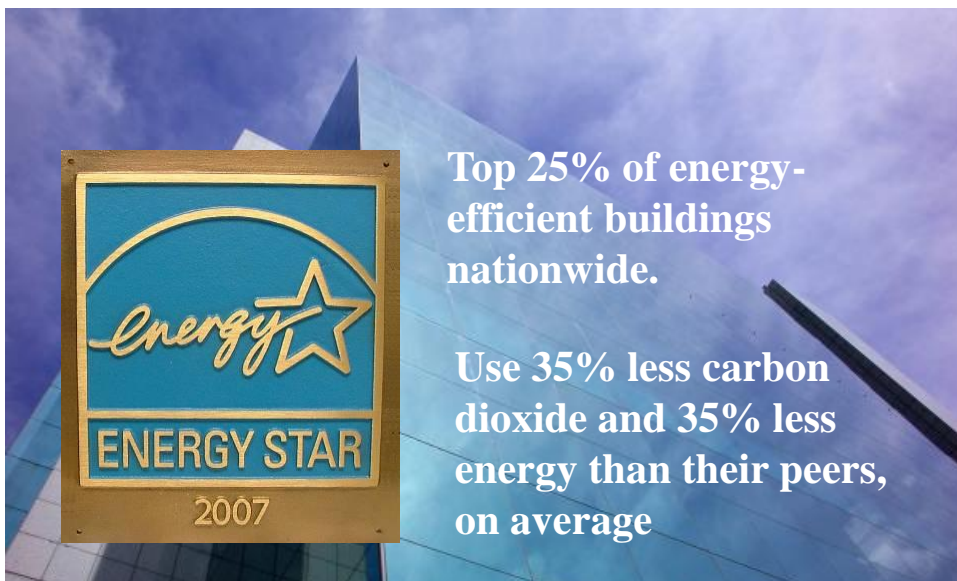
ENERGY STAR 1-100 rating scale



U.S. EPA Energy Performance Rating System



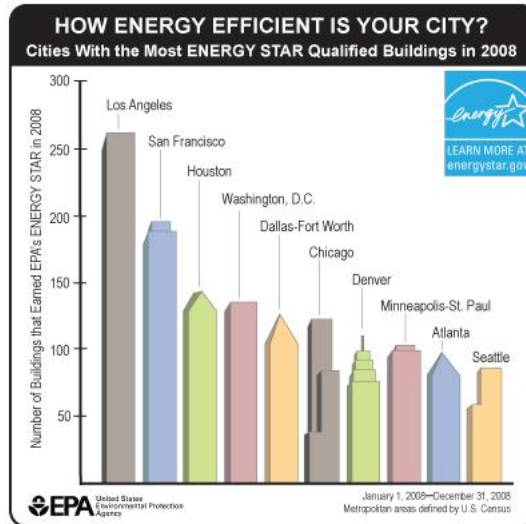
Building Recognition



ENERGY STAR Buildings: A Market Differentiator



- Over 8,100 buildings have earned the ENERGY STAR
- Occupancy/tenant retention is higher
- Higher asset value upon disposition



Low Carbon Hospital Case Study

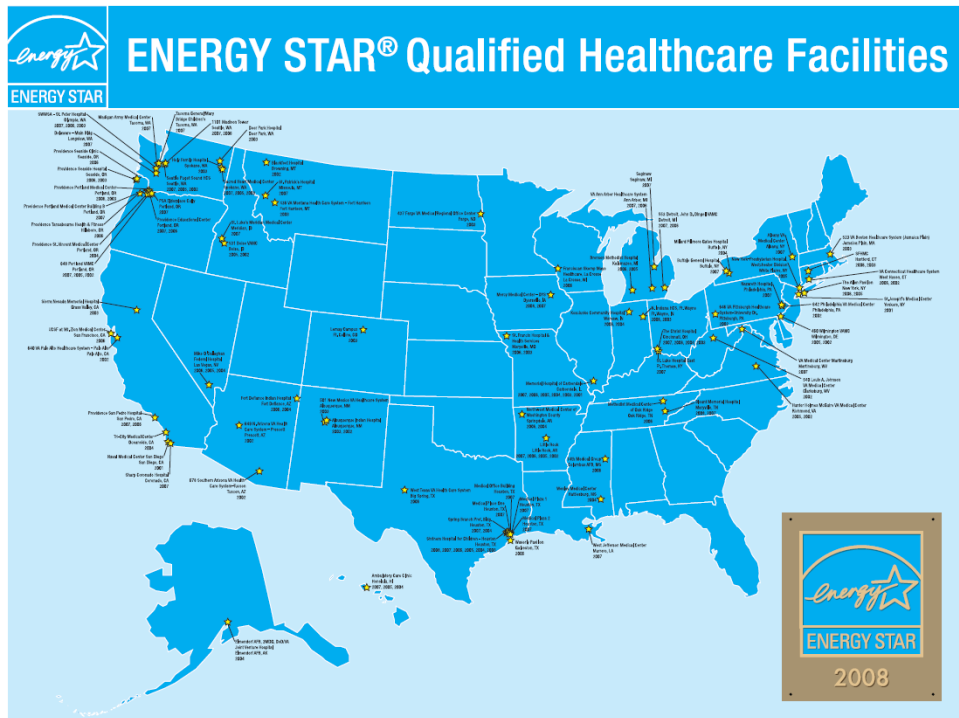


- Cut gas bill by 50%
- Reduced electricity bill by 17%
- Increased rating to 91 in one year



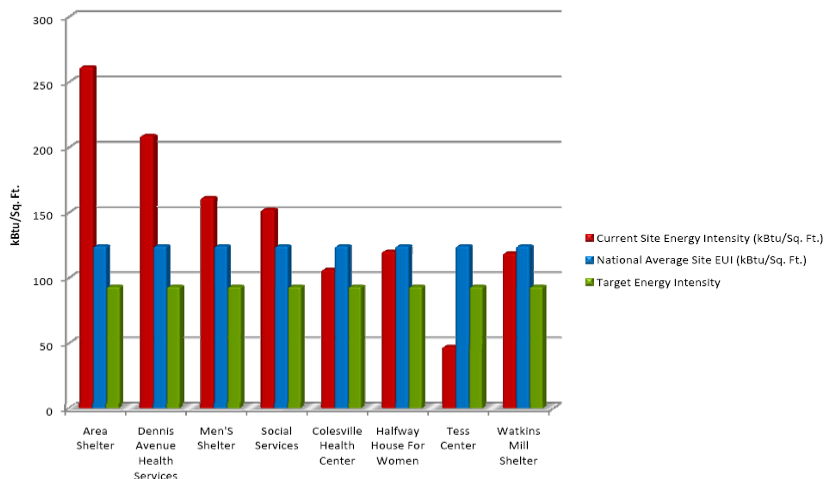
St. Francis Hospital & Health Services
Marysville, Missouri





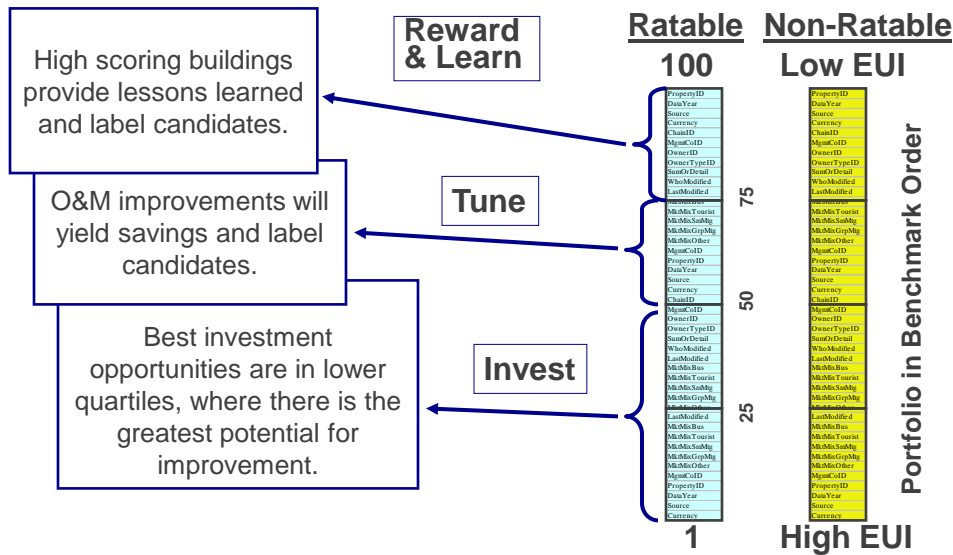
Non-ratable Spaces: Compare to National Average

Healthcare Facilities

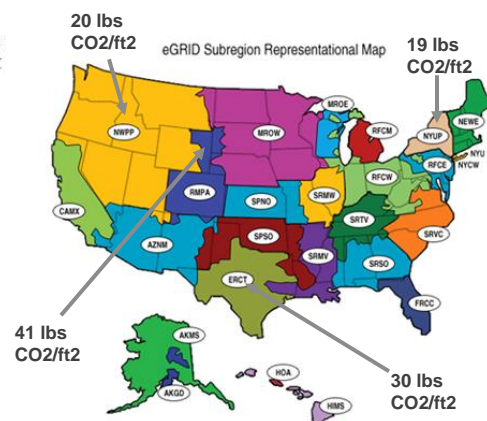
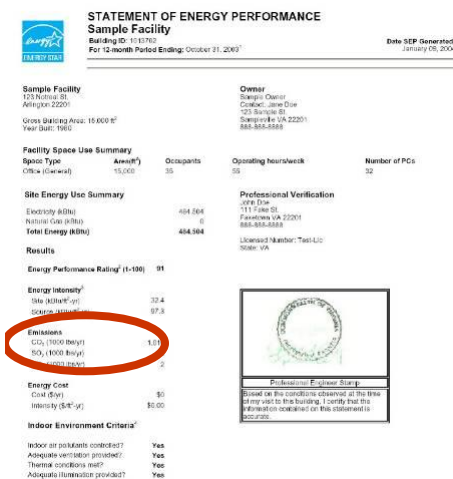


Source: Montgomery County Climate Protection Plan, 2009

Set Priorities Across Portfolios



Carbon Emissions Tracking



Emissions factors consistent with major GHG Reporting Protocols (e.g. WRI/World Business Council Protocol)

Maintaining an Accurate Rating

Monthly:

Input new energy data

At least quarterly:

Review space data for accuracy

Edit if necessary



46th Annual Conference & Technical Exhibition



ENERGY STAR Campaigns

Change the World, Start with ENERGY STAR Campaign

Join the Fight Against Global Warming: At Home

If you want to make a difference in the fight against global warming, your home is a great place to start. In fact, an average home contributes twice the amount of greenhouse gases to the environment as an average car! EPA's ENERGY STAR offers many tools to help you use less energy at home, which means less greenhouse gas emissions. Learn how to assess your home and improve its overall efficiency.

[Where Does My Money Go?](#) See the breakdown of typical energy expenses for a single family home.



MAKE A PLAN. Use [ENERGY STAR's Home Advisor](#) to get specific recommendations on home improvement projects to increase energy efficiency and comfort for the area where you live — whether you choose do-it-yourself or hire a qualified professional.



LOOK FOR THE STAR. Choose [products that have earned the ENERGY STAR label](#). These products meet strict guidelines to help you save money while offering the features consumers want and helping to protect our environment. Products with the ENERGY STAR label are available in more than 60 product categories — including new homes.



GO ROOM-BY-ROOM. [Take a tour of ENERGY STAR @home](#) and learn what you can do this spring to save energy, save money, and help protect our environment.



TRACK YOUR PROGRESS. Use [ENERGY STAR's Home Energy Yardstick](#) to compare your household's energy use to others across the country. Get your score now, take the ENERGY STAR Pledge, and then come back in 12 months



NAME: Martha Ware

FIGHTING GLOBAL WARMING BY: Using ENERGY STAR® qualified products, including lighting, a programmable thermostat, a furnace, and new insulation.

ANNUAL SAVINGS:
\$1,450 | 11,000 kWh
12,000 lbs. CO₂

Tell Us How You Save!

[SHARE YOUR STORY](#)

[View All Stories](#)

[View All Videos](#)

WATCH VIDEOS

[Set and Save: Using Your Programmable Thermostat](#)



CHANGE THE WORLD, START WITH ENERGY STAR

Take the ENERGY STAR Pledge

New York Presbyterian Hospital

[TAKE THE ENERGY STAR PLEDGE](#)

NewYork-Presbyterian Hospital is one of the most comprehensive university hospitals in the world, with leading specialists in every field of medicine. We are composed of two renowned medical centers, NewYork-Presbyterian Hospital/Columbia University Medical Center and NewYork-Presbyterian Hospital/Weill Cornell Medical Center, and affiliated with two Ivy League medical institutions, Columbia University College of Physicians & Surgeons and Weill Medical College of Cornell University.

Announcements for Participating Organizations

Campaign materials are available to help you engage your community: Find out how you can [Spread the Word](#).

2009-2010 Participation Highlights

Goal for the Year:	3,560,000 lbs of ghgs
Current Total:	6,089,909 lbs of ghgs
Percent to Goal:	171%

Questions about your Goal?

If you have questions about setting or changing your goal, please email changetheworld@energystar.gov.

2009-2010 Savings Breakdown

Greenhouse Gas Emissions:	6,089,909 lbs
Individuals:	396
Dollars:	\$483,519
kWh:	3,413,523
BTUs:	7,181,234,120

[See Pledges by Action Item](#)

NewYork-Presbyterian
The University Hospital of Columbia and Cornell

ENERGY STAR Low Carbon IT Campaign



Activate Sleep mode of computer hard drives and monitors

Spring Branch Independent School District activated sleep settings on 7,000 computers and monitors, and is now saving \$230,000 annually.

North Thurston Public Schools activated sleep settings on 4,000 computers and saves \$45,000 annually.

University of Wisconsin – Oshkosh activated system standby on 485 computers to save \$9,000 annually.

Order “Off the Shelf” Materials

Place your order at
energystar.gov/publications

All publications are offered
free of charge and also
available electronically.

If you need to request large
quantities, contact the
ENERGY STAR Hotline at
hotline@energystar.gov or
call 1-888-782-7937.



Next Steps

Polling Question:

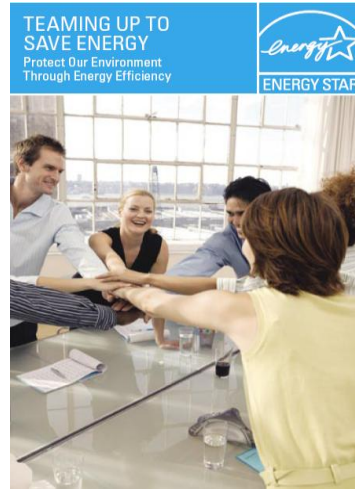
How important is saving energy in your organization?

- a. It is core to our mission and everyday work
- b. I think our facilities management people are working on it
- c. Just beginning to explore

Establish a Culture of Energy Conservation

- How to start your energy program
- Organizing your energy team
- Building capacity
- Sustaining the team
- Maintaining momentum

Available online at www.energystar.gov



Next Steps

- **Benchmark your Healthcare System Portfolio at**
www.energystar.gov/benchmark
- **Join ENERGY STAR at**
www.energystar.gov/join





Clark Reed
reed.clark@epa.gov
Director of Healthcare Facilities Division
ENERGY STAR, U.S. EPA



www.energystar.gov/healthcare

American Reinvestment and Recovery Act



- **State Energy Program Funds**
 - \$3.1 billion fund was allocated to states and territories
- **Energy Efficiency Community Block Grants**
 - \$2.7 billion in formula grants to states, cities, counties, tribes

Contact your State Energy Office to learn if funding opportunities are available to hospitals or other healthcare facilities

ENERGY STAR in legislation *and* voluntary campaigns

POLICIES LEVERAGING ENERGY STAR TOOLS		
State/ Municipality	Policy	Summary
Borough of West Chester, PA	Borough Ordinance	This Ordinance requires new commercial construction to be Designed to Earn the ENERGY STAR and benchmarked using EPA's Portfolio Manager .
City of Denver, CO	Executive Order 123	Executive Order 123 requires new city-owned and future city-owned and operated buildings to be Designed to Earn the ENERGY STAR and benchmarked in EPA's Portfolio Manager .
District of Columbia	Green Buildings Act of 2006	The Green Buildings Act of 2006 requires buildings to be Designed to Earn the ENERGY STAR and benchmarked in EPA's Portfolio Manager .
District of Columbia	Clean and Affordable Energy Act of 2008	The Clean and Affordable Energy Act of 2008 requires all eligible privately-owned commercial buildings to be Designed to Earn the ENERGY STAR and benchmarked in EPA's Portfolio Manager on an annual basis. States a publicly available online database.
State of CA	AB 1103, 2007	Assembly Bill 1103 requires, as of January 1, 2008, all new nonresidential buildings to be Designed to Earn the ENERGY STAR and benchmarked in EPA's Portfolio Manager . It also requires, as of January 1, 2008, all existing nonresidential buildings to be Designed to Earn the ENERGY STAR and benchmarked in EPA's Portfolio Manager .
State of MI	EO 2005-4, 2005	Executive Order 2005-4 requires the establishment of an energy efficiency saving program by the Department of Energy and Environment. It requires that all state buildings be Designed to Earn the ENERGY STAR and benchmarked using EPA's Portfolio Manager .
State of OH	EO 2007-02	Executive Order 2007-02 establishes the Energy Star program as the benchmarking tool for state buildings. It requires that all state buildings be Designed to Earn the ENERGY STAR and benchmarked using EPA's Portfolio Manager .

CAMPAIGNS AND INCENTIVE PROGRAMS LEVERAGING ENERGY STAR TOOLS		
State/ Municipality	Policy	Summary
City of Albuquerque, NM	Green Path Program	This program encourages and facilitates the voluntary design and construction of energy-efficient buildings that meet measurable criteria, which includes earning Designed to Earn the ENERGY STAR through EPA's Target Finder .
City of Chicago, IL	Chicago Green Office Challenge	Participants in the Chicago Green Office Challenge will use EPA's Portfolio Manager to track energy and water use and compile results at the end of the contest period.
City of Louisville, KY	Louisville Kilowatt Challenge	Participants in the Louisville Kilowatt Challenge will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of all commercial buildings in the city.
City of Portland, OR	BOMA Energy Showdown	Participants in the BOMA Portland Office Energy Showdown will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of commercial offices.
City of San Francisco, CA	Earth Hour 24/7 Energy Challenge	Participants in the San Francisco Earth Hour 24/7 Energy Challenge will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of office buildings, hotels, retail stores, hospitals, medical office buildings, supermarkets, and schools.
City of Seattle and King County, WA	BOMA Kilowatt Challenge	Participants in the BOMA Seattle/King County Kilowatt Challenge will track their building's energy performance using EPA's Portfolio Manager and work to improve performance during the campaign period. The competition is open to owners and managers of commercial offices.
State of NM	HS 534, Sustainable Building Tax Credits	To qualify for income tax credits, applicants must demonstrate that the commercial building is 50 percent more efficient than an average building of the same type using EPA's Target Finder .
State of NJ	NJ Pay for Performance Program	Under the Pay for Performance program, commercial building owners are given technical assistance with developing and implementing an Energy Reduction Plan to reduce energy use by 15 percent or more. Participants benchmark energy use in EPA's Portfolio Manager to verify the required 15 percent threshold savings.

More at www.energystar.gov/government

Questions and Answers