



Better Buildings Program Overview & Engaging Your CFO



About Better Buildings

- Better Buildings:** A broad, multi-strategy initiative aiming to improve the energy use of our nation's commercial, industrial, residential, and public buildings by 20% over 10 years
 - Better Buildings Challenge:** A leadership initiative calling on CEOs, university presidents, building owners, state and local government leaders, and residential housing developers to publically pledge to reduce entire portfolio's energy use
 - Better Buildings Alliance:** Members address energy efficiency needs in their buildings by setting savings goals, developing innovative resources, and adopting cost-effective technologies and market practices.

Better Buildings Challenge Snapshot, 2014

Membership	
Number of Partners and Allies	250+
Square Feet Represented	3.5 billion
New Members in 2014	60
Solutions	
Partner Solutions Available for Replication	160+
Results	
Energy Saved (Btus)	114 trillion
Dollars Saved	\$865 million
Avoided CO ₂ e emissions (tons)	7 million
Funding Committed/Placed	\$5.5 billion / \$3 billion

Better Buildings Alliance Snapshot, 2014

Membership	
Number of Member Organizations	185
Square Feet Represented	10 billion
Percent of U.S. Commercial Buildings	11%
New Members in 2014	14
Activities	
Energy Savings Activities Available to Members	50+
Results	
Increase in Member Activity in 2014	More than 20%
Average Annual Energy Savings Reported	More than 2%

Better Buildings Alliance Healthcare members

- **Ascension Health***
- Beaumont Health System*
- Bon Secours St. Francis Health System
- Broward Health North
- Catholic Health Initiatives (CHI)
- CentraCare Health System
- **Cleveland Clinic Foundation***
- Defense Health Agency (DHA)
- Gundersen Lutheran Health System*
- Health Care REIT
- HealthSouth
- Hospital Corporation of America
- Inova Health System
- Kaiser Permanente
- Legacy Health System*
- Lincoln Harris
- Mayo Clinic
- **New York-Presbyterian Hospital***
- North Shore-Long Island Jewish Health System
- Providence Health & Services
- Southwestern Vermont Health Care
- Summa Health System
- U.S. Department of Veterans Affairs
- University of Maryland Medical Center*
- **University of Pittsburgh Medical Center***
- University of South Alabama Medical Center
- Veterans Health Administration
- Westchester Medical Center

*Steering Committee Member

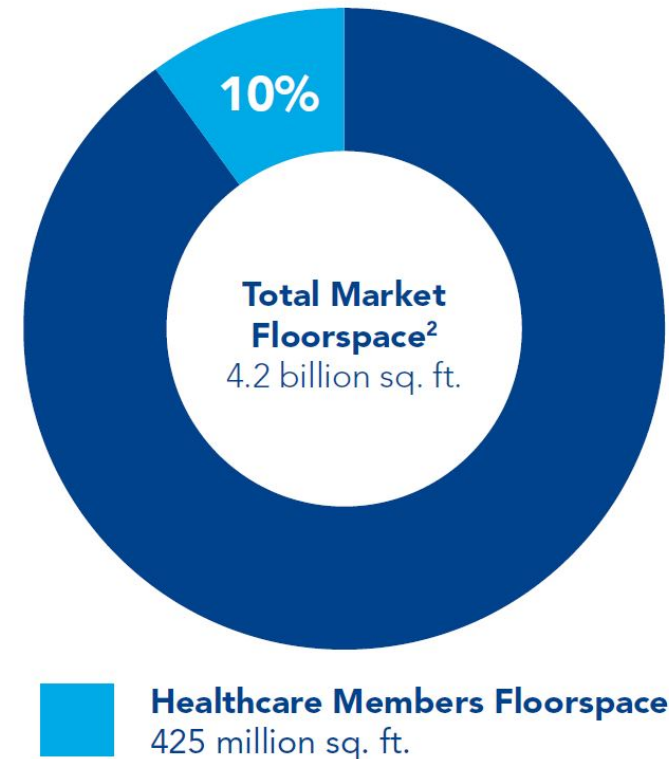
Members in **bold** have taken the Better Buildings Challenge

There are currently 28 members in the Healthcare Sector, accounting for over 400 million sq. ft. of space.

The Healthcare Sector

- 28 members 425 million sq. ft.
- 10% of the sector's 4.2 billion square feet in the U.S.
- **Top 3 Technology Teams:**
 - Lighting & Electrical
 - Space Conditioning
 - Energy Management Information Systems
- **Key Links**
 - [Sector Webpage](#)
 - [Sector Opportunities document](#)

Healthcare Members as a Percent of Market Floorspace



Know and Engage Your CFO

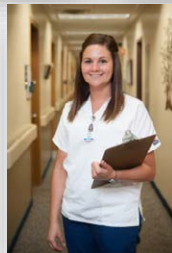
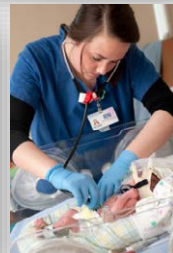
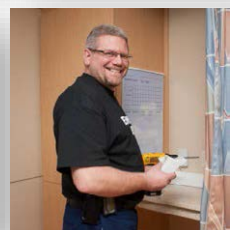
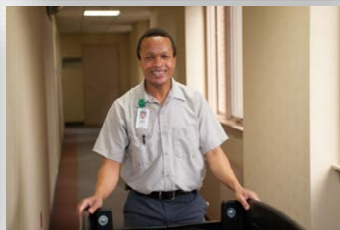
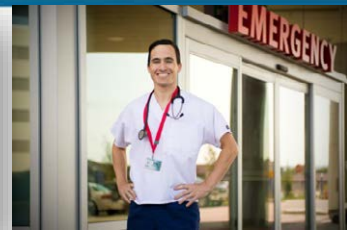
- Establish a working relationship
- Understand and learn about your CFO's and organization's priorities
- Emphasize the benefits of your projects based on what is most valued by your CFO
- Have regular update meetings to share progress of projects and to quantify and demonstrate success of the efficiency projects
- Expand opportunities for benefits beyond just financial savings

Healthcare Benefits of Efficiency Projects

- Financial cost savings

But also...

- Improved patient care
- Better healing environments
- Improved safety
- Risk mitigation
- Environmental benefits
- Positive PR
- Improved lighting quality
- And more!



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Top 10 Reasons The CFO Asks So Many Irritating Questions

- 10. Take great pleasure in watching people squirm in their seat**
- 9. It's how they measure the ROI of their college degree**
- 8. Can't get people to talk to them otherwise**
- 7. Power Trip!**
- 6. Wants there to be no doubt they are smarter than a 5th grader**

Top 10 Reasons The CFO Asks So Many Irritating Questions

- 5. Chance to show off their ‘smarts’**
- 4. Always looking for ways to deploy ‘rope-a-dope’**
- 3. It stacks up more gold in the basement**
- 2. Stall tactic!**
- 1. They get goose bumps when someone calls them an “askhole!”**

The Green of Green



We will improve health & lower cost



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Gundersen Service Area



Today We Are

An Integrated Delivery System

65 Clinic locations; Primary and Specialty Care

5 Hospitals including behavioral health

Medical Foundation

6,475 total employees

- 522 Physicians
- 301 Associate Staff



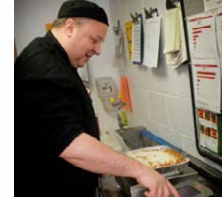
Gundersen's Envision® Program



- 1. Energy Management**
- 2. Waste Management and Control**
- 3. Recycling**
- 4. Sustainable Design of New Facilities**



Gundersen's Envision® Portfolio



- 50% Fossil Fuel Energy Efficiency Improvement vs. 2008 baseline
- Achieved Energy Independence October 14, 2014
- 35% Solid Waste stream recycling
- 70% pre-consumer food waste reduction (17 tons annually)
- Surgical "Single Use Device" = 14,000lbs
- 40% hazardous waste reduction



Gundersen's Vision for Energy and Environmental Stewardship

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Energy Conservation

- Energy Conservation should be our first fuel
- Lowering our Fixed Operating Cost is ESSENTIAL to our long term financial health
- Improve health, lower costs

25% Energy Efficiency Improvement

Capital Investment = \$2.1M

Annual Benefit = \$1.7M

Significant Projects

- Scheduling adjustments to Heating, Cooling, and Lighting systems
- Lighting retrofit
- Chiller replacements
- Electronic controls retrofits
- Insulation of pipes, fittings, mechanical rooms
- PC shutdown software



Clean Energy Production

Capital Investment = \$32.5M

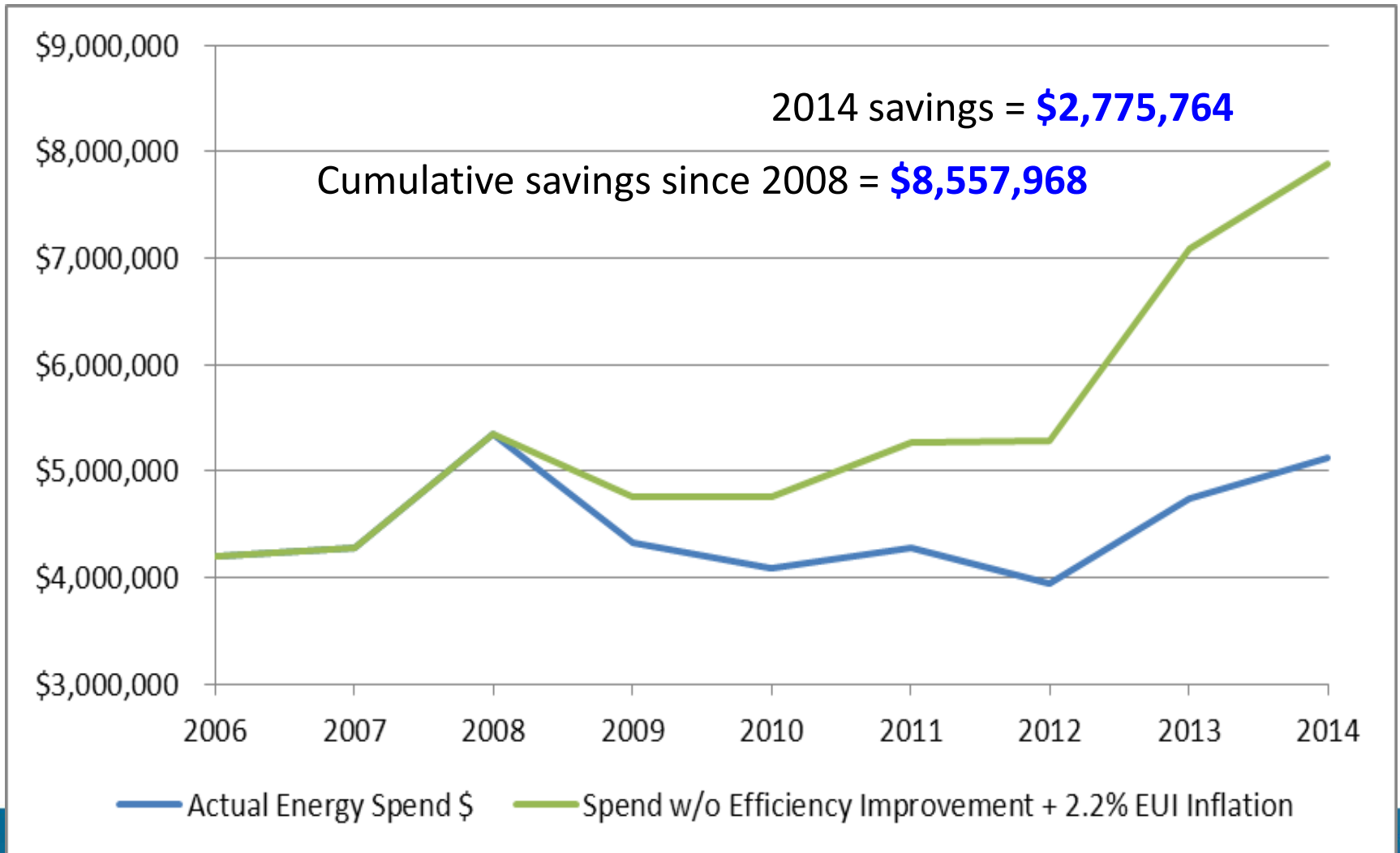
Annual Benefit = \$2.6M

Significant Projects

- Biomass Boiler (woodchips) with Steam Turbine – 38% of energy goal
- Dairy Biogas (cow manure digesters) – 18% of energy goal
- Landfill Gas – 10% of energy goal
- Wind – 10% of energy goal



Actual Energy Cost vs. “Business as Usual”



Comprehensive Waste Management

Capital Investment = None
Annual Benefit = \$140K

Significant Projects

- **Pharmaceutical / Hazardous Waste Reduction – 5 tons (40%) improvement**
- **Regulated Medical Waste Reduction – 14 tons (14%) improvement**
- **Pre-consumer Food Waste Reduction – 20 tons (80%) improvement**



Reuse / Recycling

Capital Investment
Annual Benefit

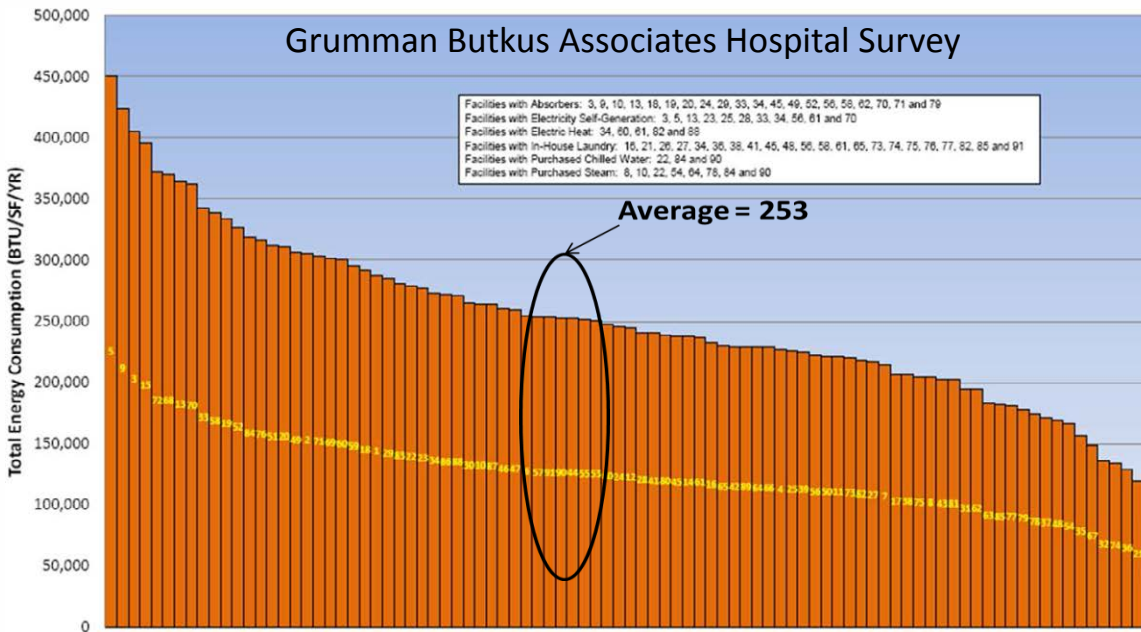
= None
= \$460K

Significant Projects

- Remanufactured devices (O.R. SUDs, O₂ Sensors, Toner Cartridges)
- Paper
- Cardboard / Plastics
- Reusable sharps containers
- Construction materials



New Hospital Sustainable Design



433,000 Square Feet

Annual Energy Usage:
115 kbtu/sqft

Estimated Annual Savings:
\$650K at current energy rates

Sustainable Design

Capital Investment = \$4.5M
Annual Benefit = \$650K

Significant Projects

- Geothermal heat pump
- Occupancy sensors and zone scheduling
- Heat recovery chillers
- Building envelope thermal integrity
- Desiccant wheel dehumidification in OR suite



What are We Solving for in Finance?

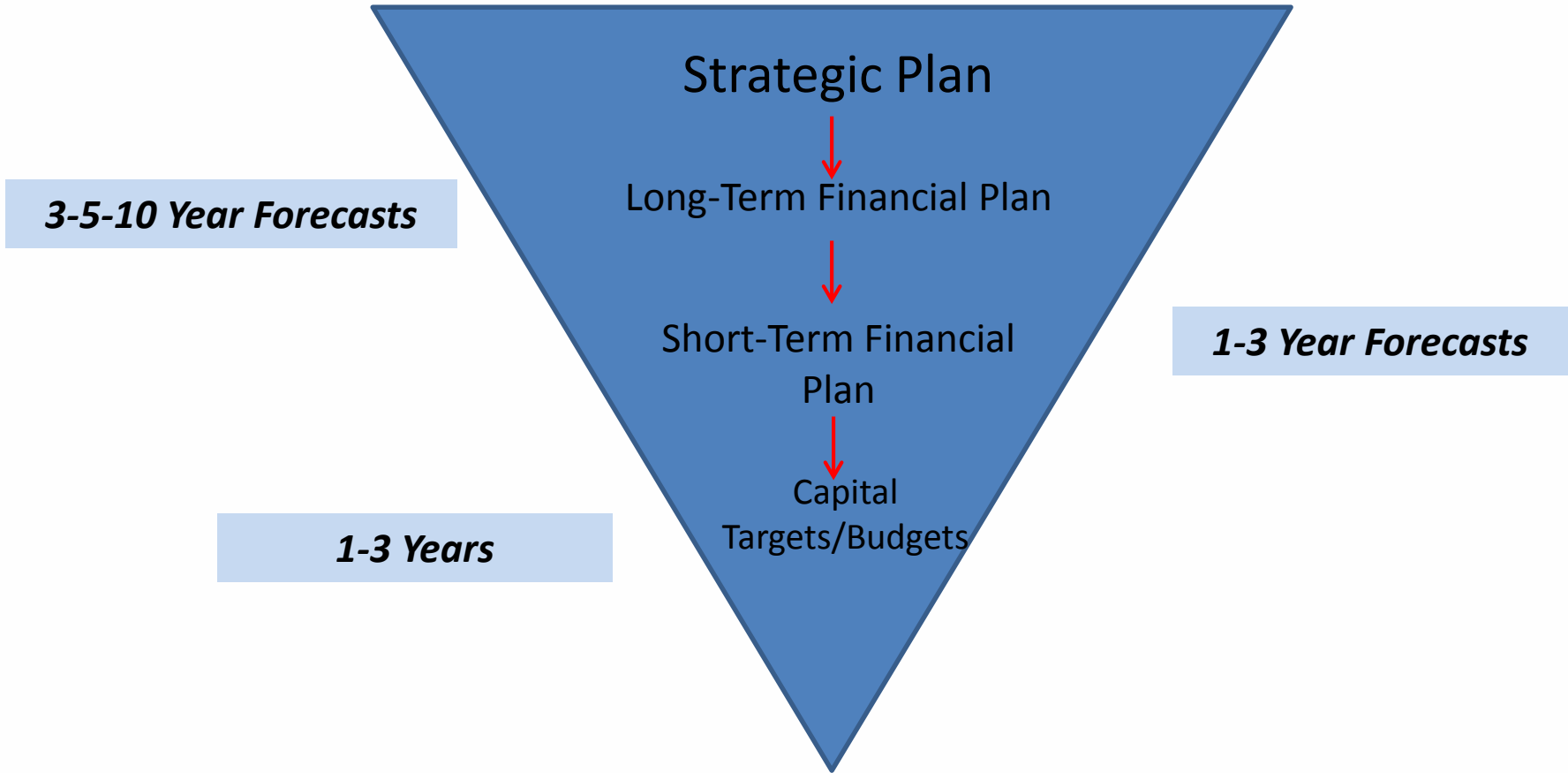
✓ *Cash*

- Balance Sheet Strength “Financial Position”
- Agility/Flexibility
- Bond Rating

✓ *Margin*

- How Much Do We Have Left Over?
- Key Source of Cash
- Measurement of Performance Over Time

The Context



Financial Analysis

➤ How

- Analyze cash inflows and outflows
- Use Scenario/Sensitivity Analysis to factor in risk



Financial Analysis

➤ Targets

- Does the project returns exceed your *hurdle rate*?
 - Net Present Value (NPV)
 - Internal Rate of Return (IRR)
- ***Payback*** ≤ 5 years



What Is the CFO Looking For?

- Credible Numbers
- Evidence of critical thinking
- Revenue and expense projections are appropriately conservative
- Risks identified
- Differentiate between types of financial improvements
 - Enhanced Revenue
 - Direct cost reductions
 - Opportunity Costs/Cost Avoidance*

It's All About Cash Flow

<u>Project</u>	<u>Start Date</u>	<u>Board Approv Pre-Grant</u>	<u>Spent or Current Forecast</u>	<u>Grants</u>	<u>Net Capital (actuals & forecast)</u>	<u>2015 Benefit</u>	<u>10 Year Benefit</u>
Project #1	May-08	n/a	\$ 2,465,000	\$ 560,000	\$ 1,905,000	\$ 1,300,000	\$ 17,470,913
Project X	Oct-09	n/a	\$ 5,700,000	\$ 250,000	\$ 5,450,000	\$ -	\$ -
Project #2	Jan-11		\$ -	\$ -	\$ -	\$ 500,000	\$ 5,000,000
Project #3	Feb-12	\$ 2,700,000	\$ 2,700,000	\$ 870,000	\$ 1,830,000	\$ 197,000	\$ 1,970,000
Project #4	Dec-11	\$ 5,500,000	\$ 5,310,000	\$ 1,535,000	\$ 3,775,000	\$ 82,000	\$ 1,150,000
Project #5	May-13	\$ 5,500,000	\$ 5,145,000	\$ 1,670,000	\$ 3,475,000	\$ 190,000	\$ 4,500,000
Project #6	Mar-13	\$ 6,500,000	\$ 6,500,000	\$ 220,000	\$ 6,280,000	\$ 450,000	\$ 5,600,000

It's All About Cash Flow

Cash Out

	2013	2014	2015	2016	2017	2018	2019	2020
Investments	\$ (21,636,133)	\$ (1,044,000)	\$ -	\$ (500,000)	\$ -	\$ (500,000)	\$ -	\$ (500,000)
Net Returns								
Project #1	\$ 1,507,000	\$ 1,552,000	\$ 1,599,000	\$ 1,647,000	\$ 1,696,000	\$ 1,747,000	\$ 1,799,000	\$ 1,853,000
Project #2	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Project #3	\$ 197,000	\$ 197,000	\$ 197,000	\$ 197,000	\$ 197,000	\$ 197,000	\$ 197,000	\$ 197,000
Project #4	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000
Project #5	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000
Project #6	\$ 560,000	\$ 560,000	\$ 560,000	\$ 560,000	\$ 560,000	\$ 560,000	\$ 560,000	\$ 560,000
Project #7	\$ 355,000	\$ 366,000	\$ 377,000	\$ 388,000	\$ 400,000	\$ 412,000	\$ 424,000	\$ 437,000
Project #8		\$ 940,000	\$ 940,000	\$ 940,000	\$ 940,000	\$ 940,000	\$ 940,000	\$ 940,000
Project #9		\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000
Project #10		\$ 650,000	\$ 670,000	\$ 690,000	\$ 711,000	\$ 732,000	\$ 754,000	\$ 777,000
Conservative Factor	\$ (368,400)	\$ (573,000)	\$ (580,800)	\$ (588,700)	\$ (596,900)	\$ (605,300)	\$ (613,900)	\$ (622,900)
	\$ (18,320,533)	\$ 4,113,000	\$ 5,227,200	\$ 4,798,300	\$ 5,372,100	\$ 4,947,700	\$ 5,525,100	\$ 5,106,100
							NPV	\$2,185,259.10
							IRR	8.2%

Cash In



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Healthcare Financial Management Association Conference – June 22-25, 2015

Is your CFO attending HFMA?

Encourage your CFO to attend our session!

Department of Energy: Energy Investment Successes from Hospital CFOs

- Wednesday, June 24, 2015 from 7:00-7:50 AM
- Presenters:
 - Michael M. Allen, FHFMA, CPA, CFO, Gundersen Health
 - Sara Schoen, LEED AP O+M, U.S. Department of Energy

Better Buildings Summit – May 27-29, 2015

Registration is now open!

WHO: 800+ Better Buildings partners and stakeholders and nearly 200 speakers will share demonstrated and proven solutions.

WHAT: 2 ½ days of sessions and meetings focused on the sharing of the most successful energy efficiency strategies. There will be plenty of time for attendees to ask questions, network, and exchange new ideas.

WHEN: May 27-29, 2015

WHERE: Washington D.C.

Learn more: energy.gov/betterbuildings/summit

CFO Perspectives Website

<http://www.energyforhealthcare.org/>

HEALTH CARE CFO PERSPECTIVES
Investment in Energy Efficiency



[Home](#) | [Case Studies](#)

Health Care CFO Perspectives: Investment in Energy Efficiency

A shared project of the U.S. Department of Energy and Practice Greenhealth

At a time when health care organizations have many items competing for investment and shrinking budgets, Practice Greenhealth and the U.S. Department of Energy want to share numerous ways hospitals are cutting costs while contributing to a healthier environment through smart energy-related investments. This website is designed to serve as a forum for hospital CFOs to share energy related case studies and communicate with their colleagues relative to their energy efforts.

Please take this opportunity to learn, to teach and to communicate with your counterparts across the country! We hope that your organization will contribute your successes through this site! All participating organizations will be highlighted in a presentation at CleanMed 2015! We would love your comments on how to make this site more useful. [Contact us](#).

Health Care Case Studies

Building Energy Management Systems

[Simches Research Building](#)

Financing Mechanisms

[University of Pittsburgh Medical Center](#)

HVAC (Heating, Ventilation, and Air Conditioning)

[Yawkey Center for Outpatient Care – Occupancy and Airflow](#)

[Gundersen Health Goes Deep for Green](#)

Case Studies from CFO Perspectives page

- Gundersen Health System:
 - Installation of a Geothermal Heating and Cooling System in new Hospital Tower and Behavioral Health Building
- Massachusetts General Hospital:
 - Simches Research Building Occupancy Schedules, Minimum Airflow Reduction, Occupancy Sensors and Lighting Retrofits
 - Yawkey Center for Outpatient Care: Occupancy Schedules and Minimum Airflow Reduction
- University of Pittsburgh Medical Center
 - Energy Management/Conservation/Project Funding and Investment

Download the [case study template](#) and submit your case study to Bob Jarboe at bjarboe@practicegreenhealth.org!