



51st ASHE
Annual Conference & Technical Exhibition
2014
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The Long Push Part III: Securing Approval and Funding for Infrastructure Upgrades

Development and Implementation of a Long-Range Strategic Infrastructure Plan and a Sound Business Case

SURVIVAL
For the **FITTEST**

Introductions

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Learning Objectives

Agenda

Evaluate

Baseline

Target

LRP


Implement

Review


Sustain

Summary

Q&A



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- Develop a long-range strategic infrastructure plan and a sound business case (energy and maintenance cost savings) to secure funding for hospital infrastructure upgrades.
- Implement phases of a long-range infrastructure upgrade plan within budget and on schedule to maintain credibility and administration confidence in the plan.
- Develop and issue regular status reports indicating actual costs and schedules as compared to budgets and deadlines.
- Measure and verify actual results (energy consumption and cost savings, maintenance savings, etc.) achieved by implementation of the plan.

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Evaluate	<ul style="list-style-type: none">• HVAC<ul style="list-style-type: none">– Air-Side Systems– Hydronic Systems• Electrical Systems<ul style="list-style-type: none">– Service– Switchgear– Generator– Fuel Oil System• Fire Protection• Fire Alarm• Nurse Call• CMMS• Telecom
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Evaluate	<ul style="list-style-type: none">• Evaluate Existing Systems<ul style="list-style-type: none">– Age– Condition– Maintenance Issues– Operational Issues– Reliability– Business Disruption– Energy Efficiency
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- Locate All Utility Meters (Electricity, Gas & Water) on a Site Plan
- Identify the Buildings Served by Each Meter
- Check for Billing Errors
- Identify and Evaluate All Utility Rebate and Incentive Program
- Implement the Procurement Strategy (Metering Arrangements, Rates, and Riders) that Yields the Lowest Unit Cost

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Develop and Organize Projects to Address Issues

- Regulatory Compliance
- Deferred Maintenance
- Energy Conservation
- Patient Satisfaction
- Preventative Maintenance
- Infrastructure Reliability

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How do you measure up?

- Utility Costs
 - M&V Baseline
 - Supply Side Audit
- Energy Star
- EUI
- Carbon Footprint

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No one can go back and make a brand-new start, my friend; but anyone can start from here and make a brand-new end.”

– Dan Zadra



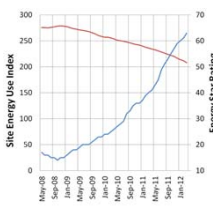
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What are your goals?

- Reduce Energy Consumption to Lowest 10% of Peer Institutions
- Reduce Greenhouse Gas Emissions by more than 25%
- Reduce Annual Energy Costs by more than \$? Million
- Improve Thermal Comfort, IAQ and Occupant Safety
- Upgrade Building Automation Systems
- Attain Higher HCAHP Scores



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Impacts

- CMMS Work Orders
- Savings Scorecard
- Backlog Reduction
- Budget
- HCAHP Scores
- Energy Star
- Lessons Learned

Performance Metrics	Evaluation Periods		Comparisons		
	Current (Trading Date: 12/31/2012)	Baseline (Trading Date: 01/01/2009)	Rating of 75	Target	National Median
Energy Performance Rating	72	53	75	N/A	50
Energy Intensity					
Site (kBtu/ft ²)	190	276	186	N/A	214
Source (kBtu/ft ²)	420	582	412	N/A	473
Energy Cost					
Star	\$ 4,356,801.68	\$ 3,741,491.25	\$ 4,277,843.84	N/A	\$ 4,302,377.36
Bifactor	\$ 2.78	\$ 3.74	\$ 2.75	N/A	\$ 3.13

Sustain

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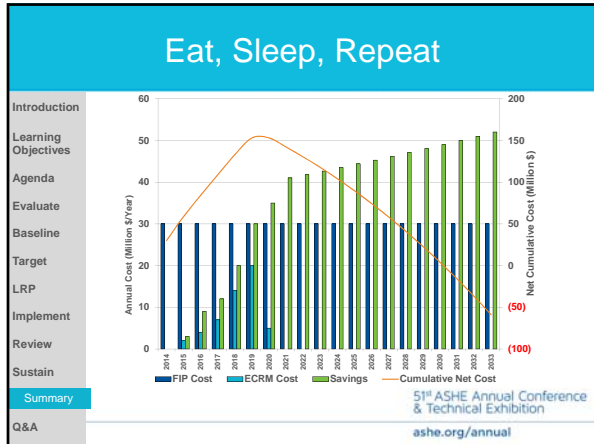
Summary

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Sustain

- Measurement & Verification
- Operator & Maintenance Training
- Design, Construction, and Commissioning Standards
- Integrate CMMS
- Stick to the Plan

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Questions?

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