Saving More Together: Greater Energy Efficiency Through Strategic Collaboration

Samantha Stafford, RE Tech Advisors
Kyle Tafuri, Hackensack Meridian Health
Mary Evers Statz, UW Health
Welcome and Introductions

Samantha Stafford
RE Tech Advisors
Healthcare Subject Matter Expert

Kyle Tafuri
Hackensack Meridian Health
Senior Sustainability Advisor

Mary Evers Statz
UW Health
Director Energy Management & Sustainability
What is Better Buildings?

In February 2011, the White House announced the Better Buildings Initiative to:

- make buildings 20% more energy efficient over the next 10 years
- accelerate private sector investment in energy efficiency
Join the Alliance; Step up to the Challenge

**STEP UP TO THE BETTER BUILDINGS CHALLENGE**
- Earn national recognition for energy efficiency leadership
- Join DOE in media events spotlighting your energy efficiency achievements
- Access technical assistance to analyze your portfolio energy use

**PARTICIPATE IN THE BETTER BUILDINGS ALLIANCE**
- Participate in peer-to-peer networking opportunities addressing sector specific energy topics
- Tap into expert-led technology and market solutions teams
- Access technology demonstration opportunities
- Develop public resources such as technical performance specifications and sample lease clauses
Better Buildings Solution Center

- Features 1,000+ partner solutions, interactive resources and toolkits, and proven and cost-effective best practice models
- Search for energy savings topics specific to your questions or needs

betterbuildingsinitiative.energy.gov/solutions
Registation is open! Early bird registration ends June 15th

Highlights include:

- Panel sessions and technical trainings (earn CEUs)
- Peer-to-peer discussions
- Ask-an-Expert/FEMP Lounge

- Networking opportunities
- Pre- and post-conference workshops
- Better Buildings Partner sessions
- Building Tours

For more information and to register:
2018energyexchange.com
Why Partners Join Better Buildings

1. Access to experts, tools, and resources
2. Peer to peer learning
3. Public Recognition
4. It’s Free!
Utility Financing and Continuous Energy Oversight

Hackensack Meridian Health
Kyle Tafuri
Senior Sustainability Advisor
Hackensack Meridian Health is a leading not-for-profit health care organization that is the most comprehensive and truly integrated health care network in New Jersey.

**OVERVIEW**

- 16 Acute Care Hospitals
- 3 Academic Medical Centers
- 2 Children’s Hospitals
- 9 Community Hospitals
- 4,024 Licensed Acute Bed

- 6,500 Physicians
- 33,000 Team Members

- $5.5 B Net Revenue

- Healthgrades America’s 50 Best Hospitals Award for 5+ consecutive years
- 568,431 ER Visits
- 153,185 Acute Admissions
- 19,000 Annual Home Care Visits

4 hospitals ranked in Top 10 in NJ

CleanMed 2018

MAY 7-9

Anchoring Healthy Communities
Energy Management Structure

- Energy Consultant Manages Committee
  - Team consists of VP Facilities, Director Plant Operations, Operations Manager, Infrastructure Specialist, Sustainability Director, Utilivisor, BMS teams as necessary
  - Tasked with oversight of energy management program
  - Meetings 1x month or as needed per project
Utility Partnership

Overview of Program:

• Begins with a free energy audit
• Energy efficiency opportunities are listed and analyzed based on payback
• Opportunities that meet the payback PSEG requires move forward into implementation phase
• Upfront capital is provided by PSEG and the hospital is required to payback 41% of the project cost for each initiative
• The payback from the hospital occurs through the energy savings from our energy bill
Eligibility

- Individual measures must meet a payback equal to or less than its measure life (this is a change for the 15 year max payback of prior programs). In additionally, the project (i.e. aggregate of the measures plus engineering costs) must meet at 1.0 PAC test to ensure fairness for our rate-payers.
## Phase 1

### Green Solutions for Customers

### Hospital Efficiency Program

HUMC - TrakSmart Bid Packs 1 & 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Measure Description</th>
<th>Design &amp; RFP Cost ($)</th>
<th>Const Mgmt Cost ($)</th>
<th>Const Admin Cost ($)</th>
<th>Cx Cost ($)</th>
<th>Direct Measure Cost ($)</th>
<th>Total Measure Cost ($)</th>
<th>Annual Electric Savings (kWh)</th>
<th>Annual Gas/Oil Savings (therms)</th>
<th>Measure Life (yrs)</th>
<th>Measure Savings ($)</th>
<th>Measure Payback (Yrs)</th>
<th>PSE &amp; G Buydown ($)</th>
<th>Customer Total Share ($)</th>
<th>Customer Monthly Payment ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C1 - New 1500 T Chiller</td>
<td>$40,000</td>
<td>$24,806</td>
<td>$1,291,918</td>
<td>$1,356,720</td>
<td>-146.241</td>
<td>-256</td>
<td>84.666</td>
<td>235</td>
<td>10.26</td>
<td>112,293</td>
<td>10</td>
<td>114,308</td>
<td>1.5</td>
<td>$7,376,724</td>
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<tr>
<td>4</td>
<td>H2 - Counter Plant Optimization</td>
<td>$1,987</td>
<td>$1,237</td>
<td>$544,406</td>
<td>$577,642</td>
<td>70.590</td>
<td>15</td>
<td>114,308</td>
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<td></td>
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</tr>
<tr>
<td>6</td>
<td>E2 - Lighting Replacements</td>
<td>$236,416</td>
<td>$24,533</td>
<td>$803,781</td>
<td>$1,050,294</td>
<td>1,250,543</td>
<td>233</td>
<td>212,502</td>
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<td></td>
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<tr>
<td>7</td>
<td>E3 - Lighting Controls</td>
<td>$145,624</td>
<td>$25,813</td>
<td>$513,400</td>
<td>$694,616</td>
<td>284,916</td>
<td>93</td>
<td>212,502</td>
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<tr>
<td></td>
<td><strong>Project Total</strong></td>
<td><strong>$283,060</strong></td>
<td><strong>$72,000</strong></td>
<td><strong>$2,341,417</strong></td>
<td><strong>$2,511,937</strong></td>
<td><strong>1,082,817</strong></td>
<td><strong>27</strong></td>
<td><strong>155,294</strong></td>
<td><strong>19</strong></td>
<td><strong>407,827</strong></td>
<td><strong>173,76,724</strong></td>
<td><strong>75,233</strong></td>
<td><strong>7,809</strong></td>
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<td></td>
</tr>
</tbody>
</table>

**Summary Table:**

- Customer Payback from Savings: 20 years
- Customer Share of the Project Cost: 36%
- PSE & G Share of the Project Cost: 64%
- Measure Savings: $407,827
- Annual Loan Amortization: $335,094
- Annual Net Cash Flow: $162,542

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**CleanMed:**

Anchoring Healthy Communities

**MAY 7-9, 2018**
## Phase 2

### Green Solutions for Customers

#### Hospital Ext Efficiency Program
**HUMC Main Chiller Plant Project**

<table>
<thead>
<tr>
<th>Item</th>
<th>Measure Description</th>
<th>Design &amp; RFP Cost ($)</th>
<th>Const Mgmt Cost ($)</th>
<th>Const Admin Cost ($)</th>
<th>Cx Cost ($)</th>
<th>Direct Measure Cost ($)</th>
<th>Total Measure Cost ($)</th>
<th>Annual Electric Savings (kWh)</th>
<th>Annual Demand Savings (kW)</th>
<th>Annual Gas/Oil Savings (therms)</th>
<th>Measure Life (yrs)</th>
<th>Measure Savings ($)</th>
<th>Measure Payback (yrs)</th>
<th>PSEG Buydown ($)</th>
<th>Customer Total Share ($)</th>
<th>Customer Monthly Payment ($)</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>ECM 6A - Connection to Research Building</td>
<td>$52,524</td>
<td>$10,943</td>
<td>$5,358</td>
<td>$596,000</td>
<td>$596,024</td>
<td>$405,019</td>
<td>$438</td>
<td>20</td>
<td>$566,855</td>
<td></td>
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<td></td>
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<tr>
<td><strong>Project Total</strong></td>
<td></td>
<td><strong>$603,810</strong></td>
<td><strong>$125,800</strong></td>
<td><strong>$61,600</strong></td>
<td><strong>$6,840,000</strong></td>
<td><strong>$7,631,210</strong></td>
<td><strong>$2,330,167</strong></td>
<td><strong>216</strong></td>
<td><strong>62,429</strong></td>
<td>23</td>
<td><strong>$582,263</strong></td>
<td>13.1</td>
<td><strong>$4,075,844</strong></td>
<td><strong>$3,355,366</strong></td>
<td><strong>$98,760</strong></td>
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### Summary Table

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Customer Payback from Savings</td>
<td>6.1 years</td>
</tr>
<tr>
<td>Customer Share of the Project Cost</td>
<td>47%</td>
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<tr>
<td>PSEG Share of the Project Cost</td>
<td>53%</td>
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<tr>
<td>Measure Savings</td>
<td>$582,263</td>
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<tr>
<td>Annual Loan Repayment</td>
<td>($11,385,122)</td>
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<tr>
<td>Annual Net Cash Flow</td>
<td>($602,859)</td>
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</tbody>
</table>
## Phase 3

### HUMC - Mediplex Connection

<table>
<thead>
<tr>
<th>Item</th>
<th>Measure Description</th>
<th>Measure Cost ($)</th>
<th>Annual Measure Savings ($)</th>
<th>Summary Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7A - Connect Mediplex Bldg to CHW</td>
<td>$1,308,655.00</td>
<td>$54,406</td>
<td>Customer Payback from Savings (Yrs.) 4.1</td>
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<tr>
<td>2</td>
<td>8 - Steam Trap Repair/Replacement</td>
<td>$88,901.00</td>
<td>$76,348</td>
<td>Customer Share of the Project Cost $1,019,249.00</td>
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<tr>
<td>3</td>
<td>9 - Parking Garage Lighting</td>
<td>$770,041.00</td>
<td>$53,815</td>
<td>PSE &amp; G Share of the Project Cost $1,502,348.00</td>
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<tr>
<td>4</td>
<td>10 - Stack Economizer Repair/Replacement</td>
<td>$75,600.00</td>
<td>$25,823</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Total ECM Cost** $2,243,197.00

**Engineering Costs** $278,400.00

**Total Project Cost** $2,521,597.00 **$250,391**
## Summary – Utility Partnership

<table>
<thead>
<tr>
<th>HackensackUMC</th>
<th>Project Cost</th>
<th>Our Cost</th>
<th>$ Saved</th>
<th>kwh Saved</th>
<th>Therms Saved</th>
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<tbody>
<tr>
<td>Phase 1</td>
<td>2,711,977</td>
<td>975,253</td>
<td>487,627</td>
<td>1,388,817</td>
<td>155,264</td>
</tr>
<tr>
<td>Phase 2</td>
<td>7,631,210</td>
<td>3,555,366</td>
<td>582,263</td>
<td>2,830,167</td>
<td>62,429</td>
</tr>
<tr>
<td>Phase 3</td>
<td>2,521,597</td>
<td>1,019,249</td>
<td>250,391</td>
<td>1,375,789</td>
<td>122,289</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>12,864,784</strong></td>
<td><strong>5,549,868</strong></td>
<td><strong>1,320,281</strong></td>
<td><strong>5,594,773</strong></td>
<td><strong>339,982</strong></td>
</tr>
</tbody>
</table>
Continuous Energy Oversight

- Monitoring in “Real Time” Central Chilled Water Plant, Boiler Plant, and all Critical AHU’s which creates new Energy Conservation Measures.
- Staffed with a Network Operations Center to work with HUMC Engineers.
- utiliVisor recommendations from 2009 thru 2017 resulted in $2.9 Million in Operational Savings with no capital cost other than metering equipment.
Continuous Energy Oversight

- Predictive Energy Analytics based upon Historical Central Utility Plant Data and Air Handling Systems.
- Implemented a Standard Operating Procedure for the Engineering Department.
- utiliVisor provides Measurement and Verification Services on all ECM’s.
Equipment Analysis

- utiliVisor’s Platform accepts data from the Building Management System. Monitoring and Analyzing Chillers, Cooling Towers, Pumping Systems and Air Handling Units.
- Examples: Plant Operating Matrix and Plant Analysis Page
Utility Insight Platform

**Sustainability Goal Compliance**
With period data measuring the watts/sqft by building

**Update for Electric Usage**
Analysis of building energy consumption throughout the day

**Year Over Year – kWh/kBTU**
Comparative analysis of electric consumption

**Green House Gas Indicator**
Graphic of Performance; as an Indicator

**Weather Comparison**
Relationship of weather/electric consumption and costs
A new recommendation has been created for HUMC: PC Ext AHU-4.

Good Afternoon All,
Over the past few weeks the PC Ext AHU-4 Supply and Return Fans speeds have trended higher than historically observed. Please see attached graph. This change in PC Ext AHU-4 operation coincided with the coldest days last month.

Additionally, the SA Static is always above the SA Static Sp. Is the supply fan placed in operator priority?

Regards,
Erich
## Savings

- **Total $ Savings:** ~$2.9 million
- **Total kwh savings:** 17,058,200
- **Total therm savings:** 1,175,358

<table>
<thead>
<tr>
<th>2017 - Measure</th>
<th>Energy Saved</th>
<th>$ Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revised Control Specs: CHW/CW Flow Control and CT Sequence</td>
<td>1355127 kwh</td>
<td>135991.14</td>
</tr>
<tr>
<td>Boiler Head Pressure Setpoint Reduction</td>
<td>211434 therms</td>
<td>111187.43</td>
</tr>
<tr>
<td>Electric Chillers: Corrected Flow Measurements</td>
<td>326100 kwh</td>
<td>32069.35</td>
</tr>
<tr>
<td>Cooling Towers: Capped PC Ext. CTs</td>
<td>95550 kwh</td>
<td>9465.27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2016 - Measure</th>
<th>Energy Saved</th>
<th>$ Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHW/CW Flow Control</td>
<td>353917 kwh</td>
<td>35646</td>
</tr>
<tr>
<td>CT Sequence</td>
<td>1272738 kwh</td>
<td>127736</td>
</tr>
<tr>
<td>Boiler Head Pressure Setpoint Reduction</td>
<td>205143 therms</td>
<td>144260</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>2015 - Measure</th>
<th>Energy Saved</th>
<th>$ Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHU Cycling</td>
<td>326505 kwh</td>
<td>39181</td>
</tr>
<tr>
<td>90 Psi Steam Header Pressure Set point</td>
<td>267000 therms</td>
<td>170000</td>
</tr>
<tr>
<td>SAT Reset Schedule</td>
<td>423863 KWH</td>
<td>34069</td>
</tr>
</tbody>
</table>
Takeaways

- Tying energy reduction measure to facilities performance evaluation
- Keeping energy as a standing agenda item
- Continuous education for team
- Innovation
Capitalizing on Utility Sponsored Energy Efficiency Programs

UW Health
Mary Evers Statz
Director Energy Management & Sustainability
Agenda

- UW Health
- Our Energy Management Journey
- Retrocommissioning-RCx
- Measures Implemented
- Commissioning-Cx
- Energy Footprint & Cost 2013-2017
- Better Building Challenge
- Integrated health system of the University of Wisconsin-Madison; clinical care and hospital entities are united.
- Serve more than 600,000 patients in south central Wisconsin and northern Illinois.
- Approximately 1,500 physicians and 15,000 staff at seven hospitals and eighty seven outpatient clinics.
Our Energy Management Journey

- 2010 began benchmarking in Energy Star Portfolio Manager & engaged Focus On Energy
- 2011 small victories - over 110K in incentives, 1M kWh, 10,000 therms
- 2012 presented to Senior Leaders - “Becoming a More Energy Efficient Organization”:
  - Become an Energy Star Partner
  - Form an Energy Team
  - Share benchmarking data
  - Engage independent firms
  - Training - give Facilities the tools they need
  - Create a culture of awareness for conservation
Retrocommissioning-RCx

- Focus on Energy Program statewide program-2012
- Second building in the state to enter the program
- UW Health’s largest stand alone clinic-1 S Park:
  - 174,000 SF with 34,000 SF ASC & 15,000 SF Medical Imaging
  - 2 MRI’s & 2 CT’s
  - Parking Ramp
  - Numerous remodels
  - 225,000 Patients/Yr.
- $50,000 study cost
Retrocommissioning-RCx

- **Savings**
  - $66,000/yr cost avoidance

- **Expenses**
  - $50,000 study cost
  - $30,000 implementation cost

- **Incentive**
  - $63,000 incentive

- Simple Payback = 0.3 years (after incentive)
<table>
<thead>
<tr>
<th>Measures Implemented</th>
<th>Total Cost Savings ($/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment scheduling and optimization</td>
<td>$342,186</td>
</tr>
<tr>
<td>Daylighting and lighting controls</td>
<td>$6,257</td>
</tr>
<tr>
<td>Fume hood and lab rebalancing</td>
<td>$77,184</td>
</tr>
</tbody>
</table>

**Better Buildings**

- **SECTOR TYPE**: Commercial
- **LOCATION**: Madison, Wisconsin
- **PROJECT SIZE**: 1,700,000 Square Feet

**Showcase Project: University Hospital**

**Annual Energy Use**

<table>
<thead>
<tr>
<th>Year</th>
<th>kWh/m^2</th>
<th>Baseline (2013)</th>
<th>Actual (2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>741 kWh/m^2</td>
<td>543 kWh/m^2</td>
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</table>

**Annual Energy Cost**

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$9,450</td>
<td>$4,200</td>
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</tr>
</tbody>
</table>

**Energy Savings:** 27%

**Cost Savings:** $2,250,000
# UW Health Retrocommissioning Project Summary

<table>
<thead>
<tr>
<th>Location</th>
<th>Year</th>
<th>Annual Electric Savings (kWh/yr)</th>
<th>Annual Gas/Steam Savings (therms/yr)</th>
<th>Annual Cost Avoidance</th>
<th>Project Cost</th>
<th>Simple Payback</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 S Park</td>
<td>2012</td>
<td>724,920 kWh</td>
<td>22,517 therms</td>
<td>$66,000</td>
<td>$82,000</td>
<td>15 months</td>
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<tr>
<td>University Hospital</td>
<td>2013</td>
<td>5,572,647 kWh</td>
<td>520,000 therms</td>
<td>$488,075</td>
<td>$486,124</td>
<td>12 months</td>
</tr>
<tr>
<td>Digestive Health</td>
<td>2015</td>
<td>1,752,426 kWh</td>
<td>66,404 therms</td>
<td>$41,000</td>
<td>$68,000</td>
<td>20 months</td>
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<tr>
<td>West Clinic</td>
<td>2016</td>
<td>413,887 kWh</td>
<td>35,119 therms</td>
<td>$54,498</td>
<td>$52,015</td>
<td>12 months</td>
</tr>
<tr>
<td>**Swedish American Hospital</td>
<td>2017</td>
<td>1,220,737 kWh</td>
<td>43,699 therms</td>
<td>$122,000</td>
<td>$25,498</td>
<td>3 months</td>
</tr>
<tr>
<td><strong>Swedish American Regional Cancer</strong></td>
<td>2018</td>
<td>282,100 kWh</td>
<td>17,922 therms</td>
<td>$32,000</td>
<td>$10,000</td>
<td>4 months</td>
</tr>
</tbody>
</table>

**Predicted savings

** TOTALS $803,573 $723,637 11 months

Utility incentives of over $585,000
Measures Implemented

- Equipment scheduling & optimization to coincide with occupancy
- Daylighting, lighting controls & LED’s
- Fume hood and lab rebalancing
- Increased economizer switchover
- Reduced humidity in non-critical areas
- Demand reduction strategies
On Demand Savings Program

▪ Focus on Energy Program-Summer of 2016
▪ Reduces peak demand through BAS during summer months (June-Sept)

Summary:
• Digestive Health Center Clinic: $1,200/month
• 1 S Park Clinic: $600/month
• Administrative Office Building: $1,100/month

▪ Total financial return for three buildings over four-month period (utility savings and incentives)= more than $32,000
Commissioning-Cx

- Union Corners Clinic-2016
- 60,000 SF
- Primary Care & Urgent Care
- Conventional HVAC, LED’s
- Fully commissioned
- LEED Silver in 2017
- Focus on Energy Design Assistance Program-30K
- Energy Star Score of 94
31% reduction in the amount of energy used per square foot
# UW Health Energy Cost

<table>
<thead>
<tr>
<th>Year</th>
<th>kBtu/sqft</th>
<th>$/sqft</th>
<th>$/MBtu</th>
<th>Square Footage</th>
<th>Total Energy Cost</th>
<th>Difference</th>
<th>Increased Costs without Improvements</th>
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<tbody>
<tr>
<td>2013</td>
<td>329</td>
<td>$3.58</td>
<td>$10.87</td>
<td>3,960,024</td>
<td>$14,159,380</td>
<td>$-</td>
<td>$-</td>
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<td>2014</td>
<td>269</td>
<td>$3.56</td>
<td>$13.23</td>
<td>4,043,905</td>
<td>$14,409,877</td>
<td>$(250,497)</td>
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<td>2015</td>
<td>253</td>
<td>$3.17</td>
<td>$12.54</td>
<td>4,064,156</td>
<td>$12,876,837</td>
<td>$1,032,047</td>
<td>$3,261,827</td>
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<td>2016</td>
<td>248</td>
<td>$2.93</td>
<td>$11.79</td>
<td>4,624,444</td>
<td>$13,548,639</td>
<td>$1,642,788</td>
<td>$3,276,144</td>
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<td>2017</td>
<td>227</td>
<td>$2.83</td>
<td>$12.45</td>
<td>4,624,444</td>
<td>$13,089,642</td>
<td>$2,712,526</td>
<td>$4,219,716</td>
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<td></td>
<td></td>
<td><strong>Total:</strong> $13,327,509</td>
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SECTOR SPOTLIGHTS | Healthcare

Healthcare facilities are one of the most energy-intensive building types, spending more than $77 billion on energy every year. Program participants contribute to strategic initiatives that address common barriers in healthcare facilities, by implementing low-energy-intensives technologies while meeting patient comfort standards and identifying funding opportunities for projects. Energy project funding mechanisms include green retrofitting funds, and partnerships with local utilities, to finance and implement energy efficient upgrades. Water management has become a priority in many health systems to reduce operating costs and environmental impact. The strategies of Better Buildings healthcare partners provide best practices that hospitals nationwide can replicate in energy management plans.

Challenge Partners with Greatest Energy Savings

- UW Health 10%
- Cleveland Clinic 15%
- NewYork-Presbyterian Hospital 11%
- UPMC University of Pittsburgh Medical Center 10%
- University of Maryland Medical Center 10%
- University of Nebraska Medical Center 10%

Leadership in Action

- Ben Taub Hospital System saved an average of 13% across 253 lighting, or 311,000 kWh in total annual savings, winning a Lighting Efficiency In Parking (LEEP) campaign award.
- HackensackUMC anticipates 20% annual energy savings at its Medical Plaza facility by utilizing the local utility’s co-utility repayment upfront funding program for projects like retrofits of their plant optimization, building automation system upgrades, and steam trap replacements.
- Leveraging an integrated approach to achieve renewable energy and energy efficiency, Gunderson Health System achieved a 2.39% energy independent day in 2016, while Kaiser Permanente is ranked in the top 25 commercial companies with installed solar capacity.
- Wallside was awarded National Association of Real Estate Investment Trusts (NAREIT) Leaders in the Light for Sustainable Real Estate Practices in Healthcare. Additionally, Wallside has certified 75 buildings in an internal Green-Aware Building Program that integrates implementation of key sustainability measures.
- NewYork-Presbyterian Hospital working closely with Lawrence Berkeley National Laboratory to host a new technology demonstration that provides real-building operation and verification to advance EMS technologies.
- Cleveland Clinic has reduced portfolio energy use 15% while improving patient comfort. For example, Hillcrest Hospital and the Twombly Family Health and Surgery Center completed air exchange rate optimizations and temperature setbacks in inpatient care areas. Cleveland Clinic also replaced 30,000 flood lights, saving 10.5 million kWh in electricity annually and winning an award from the Interior Lighting Campaign.
- Responding to increasing water costs, droughts, and corporate goals, Catholic Health Initiatives, Cleveland Clinic, Montefiore Medical Center, Oregon Health & Science University, and University of Nebraska Medical Center are working to accurately benchmark and track water consumption, while finding opportunities to increase water efficiency across their portfolios.
- Recognizing the need toward warmer management, the Better Buildings Alliance American Society for Healthcare Engineering (ASHE) included water consumption and operational data for the first time on its survey. The survey is intended to update the ENERGY STAR score for hospitals and medical office buildings.
- UW Health entitled Wisconsin Focus on Energy On Demand Savings Program and successfully reduced three boilers’ electric demand levels by 15% compared to recent years, without disrupting employee or patient comfort.

Sector Accomplishments

- Supported and shared solutions on optimizing air exchange rates through case studies and customer presentations in healthcare facilities to improve patient health while reducing unnecessary energy consumption and meeting energy standards.
- Promoted the ASHE Healthcare Energy and Water Survey to influence improved metrics for general medical and surgical hospital and medical office building performance benchmarking.
- Encouraged improved operations with building energy management information systems (BEMIS) by promoting the Energy-Efficient Army and the new BEMIS Tool, which provides critical support and information to partners.
- Provided resources on managing energy consumption of central plants and related equipment through the U.S. Advanced Energy and Sustainable Facilities.
- Helped utility members of the Connection for Energy Efficiency connect with utility energy efficiency staff and provide resources to healthcare organizations. Documented best practices in case studies, which are available at the Better Buildings Solution Center.

CleanMed

Anchoring Healthy Communities

May 7-9, 2018
Resources

- Continuous Energy Oversight Saves $400,000 Annually at Hackensack Meridian Health
- Utility Financing Partnership for Hospitals (Hackensack Meridian Health)
- UW Health’s University Hospital Achieves 27% Energy Savings
- Building Automation Reduces Peak Load Across UW Health’s Campus
- Better Buildings Financing Navigator
Thank You

Questions?

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