achieving beyond the boundaries with …

performance solutions
Agenda

• Introductions
• The Energy Cost Challenge
• The Sustainability Challenge
• Energy & Sustainability Solutions
• Guaranteed Energy Performance Contracting
• Measuring the Results
• Summary
• Q&A
Introductions
Introductions

Marc Craddock, CEM – Energy Account Executive, Siemens
The Energy Cost Challenge
## The Energy Cost Challenge

### Valencia Community College Energy Cost ($) Per Sq Ft

<table>
<thead>
<tr>
<th>Campus</th>
<th>2004/2005</th>
<th>2005/2006</th>
<th>%Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown</td>
<td>$1.58</td>
<td>$1.95</td>
<td>23%</td>
</tr>
<tr>
<td>East</td>
<td>$2.08</td>
<td>$2.65</td>
<td>27%</td>
</tr>
<tr>
<td>Osceola</td>
<td>$2.75</td>
<td>$3.20</td>
<td>16%</td>
</tr>
<tr>
<td>West</td>
<td>$1.88</td>
<td>$2.31</td>
<td>23%</td>
</tr>
<tr>
<td>Winter Park</td>
<td>$1.77</td>
<td>$2.69</td>
<td>52%</td>
</tr>
<tr>
<td>Average</td>
<td>$2.01</td>
<td>$2.56</td>
<td>27%</td>
</tr>
</tbody>
</table>
## The Energy Cost Challenge

### Valencia Community College Total Energy Spend

<table>
<thead>
<tr>
<th>Year</th>
<th>$ Spend</th>
<th>$ Increase</th>
<th>%Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/2005</td>
<td>$ 3,250,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005/2006</td>
<td>$ 4,150,000</td>
<td>$ 900,000</td>
<td>28%</td>
</tr>
<tr>
<td>2006/2007*</td>
<td>$ 4,570,000</td>
<td>$ 420,000</td>
<td>10%</td>
</tr>
<tr>
<td>Total Increase</td>
<td>$ 4,570,000</td>
<td>$ 420,000</td>
<td>38%</td>
</tr>
</tbody>
</table>

* 2006/2007 Figures Were Budgetary Numbers for Planning Purposes
The Sustainability Challenge
The Sustainability Challenge

The World in 2006

- Gas Hits $3.00 / Gal.
- War in Iraq
- Global Warming
- USGBC membership

- Democrats Control Congress
- An Inconvenient Truth
- Headline: Green Building Goes Big

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The Sustainability Challenge

• Acknowledgement of Concern Regarding Global Warming
• Recognition of Need to Reduce Greenhouse Gas Emissions by 80%
• Statement of Belief that Colleges & Universities Should Lead in this Effort
  • Reduce Global Warming Emissions
  • Integrating Sustainability into Curriculum
  • Providing Educated Graduates to Achieve Climate Neutrality
• Commitment to Develop a Plan for Campus Climate Neutrality
The Sustainability Challenge

- Commitment to Develop a Plan for Campus Climate Neutrality
  - 2 Months – Establish Institutional Structure
  - 2 Months – Select Tangible Actions
    - Green Building Policy
    - Energy Smart Procurement Policy
    - Green Power Purchasing
  - 1 Year – Greenhouse Gas Emissions Inventory
  - 2 Years – Climate Action Plan
Energy & Sustainability Solutions
Energy & Sustainability Solutions

**Lighting Upgrades**
- Day-Light Harvesting Pilot Project
- Occupancy Sensor Projects
- Energy Efficient Lighting Upgrades (Electronic Ballast / T8 Lamps)

**Water Fixture Upgrades**
- Waterless Urinal Pilot Project
- Low Flow Aerator Installation
- Early Leak Detection & Repair Efforts
Energy & Sustainability Solutions

College-wide Recycling Program

- 2007 – Only Mixed Paper Collection
- 2008 – Expanded to Add Cardboard, Aluminum Cans, and Plastic Bottles
- Over 43 Tons of Landfill Waste Diverted

<table>
<thead>
<tr>
<th>Month /Year</th>
<th>CARDBOARD</th>
<th>MIXED PAPER</th>
<th>PLASTIC BOTTLES</th>
<th>ALUMINUM CANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 2008</td>
<td>10,540 pounds</td>
<td>****</td>
<td>****</td>
<td>****</td>
</tr>
<tr>
<td>Nov 2008</td>
<td>16,960 pounds</td>
<td>****</td>
<td>****</td>
<td>****</td>
</tr>
<tr>
<td>Dec 2008</td>
<td>15,025 pounds</td>
<td>****</td>
<td>10 pounds</td>
<td>****</td>
</tr>
<tr>
<td>Jan 2009</td>
<td>20,755 pounds</td>
<td>7,630 pounds</td>
<td>42 pounds</td>
<td>5 pounds</td>
</tr>
<tr>
<td>Feb 2009</td>
<td>13,097 pounds</td>
<td>****</td>
<td>45 pounds</td>
<td>****</td>
</tr>
<tr>
<td>Mar 2009</td>
<td>16,500 pounds</td>
<td>520 pounds</td>
<td>39 pounds</td>
<td>18 pounds</td>
</tr>
<tr>
<td>TOTAL TONS</td>
<td>43.44 tons</td>
<td>4.1 tons</td>
<td>136 pounds</td>
<td>49 pounds</td>
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</tbody>
</table>
Energy & Sustainability Solutions

Establishment of Sustainability Committee

- Review and Recommend Energy Initiatives
- Review and Recommend Sustainability Initiatives
- Guide Integration of Sustainability into Curriculum
- Recommended LEED NC for New Buildings
- Recommended VCC to Become Signatory of Presidents’ Climate Commitment

Valdosta State University
Patrick Schles, President

Valencia Community College
Sanford Shugart, President

Vermilion Community College
Sue Collins, President

Victor Valley College
Robert Silverman, Superintendent/President

Villanova University
Peter Donohue, President

Virginia Commonwealth University
Michael Rao, President
Leadership in Energy and Environmental Design (LEED)

- Valencia Commitment on all New Buildings

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Efficiency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor Environmental Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable Sites</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation &amp; Design Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials &amp; Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Leadership in Energy and Environmental Design (LEED)

- Valencia Commitment on all New Buildings
- Three (3) LEED New Construction Projects Completed

Allied Health Sciences Building

- 80,000 Sq. Ft. Facility
- Alternative Transportation Promotion
- Light Colored Reflective Roofing
- 99% of Construction Waste (1,450 tons) Recycled
- Green Housekeeping Products Only
- High Efficiency Chilled Water for Building
Energy & Sustainability Solutions

Leadership in Energy and Environmental Design (LEED)

• Valencia Commitment on all New Buildings
• Three (3) LEED New Construction Projects Completed

Special Events Center

• 17,000 Sq. Ft. Facility
• Natural Area Preservation
• Rainwater Recycling for Use in Toilets
• Cistern for Rainwater Storage
• Drought Tolerant Landscape Design
• High Efficiency Chilled Water for Building
Energy & Sustainability Solutions

Leadership in Energy and Environmental Design (LEED)

- Valencia Commitment on all New Buildings
- Three (3) LEED New Construction Projects Completed

VCC/UCF Joint Use Facility

- 100,000 Sq. Ft. Facility
- On-Site Renewable Energy (Solar)
- Green Power Purchase
- Air Ducts Sealed During Construction
- Water Efficient Faucets with Motion Sensors
- High Efficiency Chilled Water for Building
Guaranteed Energy Performance Contracting
Guaranteed Energy Performance Contracting

What is Energy Performance Contracting?

• The Process of Leveraging GUARANTEED Future Cash Savings From Energy and Operational Costs to Invest in Facility Improvements Right Now

• Redirection of Capital Currently Flowing to Utility Costs and Maintenance to Fund Facility Improvements Now
Guaranteed Energy Performance Contracting

Before Program Term
Operating Budget
- Costs
  - Utilities
  - O&M
  - Capital Plan

During Program Term
Operating Budget
- Costs
  - Utilities
  - O&M
  - Capital Plan
- Investment
  - Modernization
  - Energy Retrofits
  - Upgrades
- Savings

After Program Term
Operating Budget
- Costs
  - Utilities
  - O&M
  - Capital Plan
- Investment
  - Modernization
  - Energy Retrofits
  - Upgrades
- Savings

PAID
Guaranteed Energy Performance Contracting

- Utility Budget
- Maintenance & Operations Budget
- Capital Budget

Performance Project Funding

Savings

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Guaranteed Energy Performance Contracting
Guaranteed Energy Performance Contracting

- HVAC Equipment
- Building Controls
- HVAC Equipment
- Building Controls
- HVAC Equipment
- Building Controls

- Lighting Systems
- Building Envelope
- Building Envelope
- Building Envelope

- IAQ
- Fire Alarm & Life Safety
- Fire Alarm & Life Safety
- Fire Alarm & Life Safety

- Waste Management
- Security
- Security
- Security

- Water Conservation
- Building Envelope
- Building Envelope
- Building Envelope

- Technology Plan
- Behavior Modification
- Behavior Modification
- Behavior Modification

- Behavior Modification
- Technology Plan
- Technology Plan
- Technology Plan

- Behavior Modification
- Technology Plan
- Technology Plan
- Technology Plan

- Technology Plan
- Behavior Modification
- Behavior Modification
- Behavior Modification

- Water Conservation
- Technology Plan
- Technology Plan
- Technology Plan

- Waste Management
- IAQ
- IAQ
- IAQ

- HVAC Equipment
- Building Controls
- Building Controls
- Building Controls

- HVAC Equipment
- Building Controls
- Building Controls
- Building Controls
### Guaranteed Energy Performance Contracting

#### Example Performance Contract Financials

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Cost</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Project Term</td>
<td>20 Years</td>
</tr>
<tr>
<td>Savings Guarantee</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Actual Savings</td>
<td>$1,100,000</td>
</tr>
<tr>
<td>ESCO Guarantee Contribution</td>
<td>$0</td>
</tr>
<tr>
<td>Annual Debt Service</td>
<td>$730,000</td>
</tr>
<tr>
<td>Annual Mechanical &amp; Controls Service</td>
<td>$100,000</td>
</tr>
<tr>
<td>Annual Performance Assurance Svc.</td>
<td>$100,000</td>
</tr>
<tr>
<td>Total</td>
<td>$930,000</td>
</tr>
<tr>
<td>Net Annual Cash Flow</td>
<td>$170,000</td>
</tr>
<tr>
<td>Total Term Cash Flow</td>
<td>$3,400,000</td>
</tr>
</tbody>
</table>
Guaranteed Energy Performance Contracting

**Example Performance Contract Financials**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Cost</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Project Term</td>
<td>20 Years</td>
</tr>
<tr>
<td>Savings Guarantee</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Actual Savings</td>
<td>$950,000</td>
</tr>
<tr>
<td>ESCO Guarantee Contribution</td>
<td>$50,000</td>
</tr>
<tr>
<td>Annual Debt Service</td>
<td>$730,000</td>
</tr>
<tr>
<td>Annual Mechanical &amp; Controls Service</td>
<td>$100,000</td>
</tr>
<tr>
<td>Annual Performance Assurance Svc.</td>
<td>$100,000</td>
</tr>
<tr>
<td>Total</td>
<td>$930,000</td>
</tr>
<tr>
<td>Net Annual Cash Flow</td>
<td>$70,000</td>
</tr>
<tr>
<td>Total Term Cash Flow</td>
<td>$1,400,000</td>
</tr>
</tbody>
</table>
Guaranteed Energy Performance Contracting

Larger Capital Improvements / Longer ROI
- Major Mechanical Replacements
- Utility Infrastructure
- Facility Construction (Central Plant)
- Bio-Fuels / Bio-Mass
- Solar, Wind, Fuel Cell, Landfill Gas

Medium Capital Improvements / Medium ROI
- Recycling and Waste Management
- LEED Buildings
- Airside Mechanical Upgrades and Replacements
- Indoor Air Quality Improvements
- Building Envelope Upgrades

Lower Capital Improvements / Short ROI
- Lighting Retrofits
- Building Controls Upgrades / Optimization
- Water Conservation
- Energy Manager & Behavior Modifications
- VFD Installations & Minor Mechanical Improvements

Combined Projects
Typical PC Program
Term – 10 to 20 Years

Combine Short with Longer Payback Projects to Fund Capital Intensive Longer Payback Items That May be Unachievable Otherwise

Typical Payback:
- Larger Capital Improvements: 13 – 50+ Years
- Medium Capital Improvements: 7-12 Years
- Lower Capital Improvements: 0-6 Years
Guaranteed Energy Performance Contracting

Current Performance Contracting Trends

• Developing New Savings Projects in Existing Buildings

• Deferred Maintenance Plan

• Unfunded Projects

• New Buildings

• Upgrading Older Equipment

• Campus Master Energy Planning

• Pursuing LEED Building Certification
Guaranteed Energy Performance Contracting

Performance Contract Timeline

- **May 2006**: Initial Contact
- **Dec. 2006**: Budget Presented
- **Sept. 2007**: Construction Start
- **May 2008**: Chilled Water Flowing
- **Aug. 2008**: Substantial Completion
- **Sept. 2008**: Performance Assurance
- **Dec. 2008**: Phase II Starts
- **N/A**: RFQ Deadline
- **April 2007**: Board Approves
- **May 2007**: FIMs Approved
- **June 2007**: Audit Delivered
- **Aug. 2007**: Contract Executed
- **Aug. 2006**: Audit Agreement
- **Nov. 2006**: All FIMs Identified
- **July 2006**: ESCO Selected
- **Aug. 2006**: FIMs Approved
- **Dec. 2006**: Construction Start
- **Sept. 2007**: Performance Assurance
Guaranteed Energy Performance Contracting

Pre-Existing Central Energy Plant

• 1,230 Tons of Cooling Capacity (4 Chillers)
• Incremental Expansion Over Time
• Convoluted Pipe Layout
• Central Boiler System
• Underground Hot Water Leaks
• Antiquated Cooling Towers
Guaranteed Energy Performance Contracting

Renovated Central Energy Plant

- 2,300 Tons of Cooling Capacity (5 Chillers)
- 4,800 Tons of Cooling Tower Capacity
- Highest Efficiency Design
- Complete Variable Flow System
- Eliminated Central Boiler System
- New Underground Chilled Water Pipe
Guaranteed Energy Performance Contracting

New Underground Chilled Water Lines

- Additional 2 Existing & 1 New Building, with Capacity for 2 Planned Buildings
Guaranteed Energy Performance Contracting

New Underground Chilled Water Lines

• Additional 2 Existing & 1 New Building, with Capacity for 2 Planned Buildings
Guaranteed Energy Performance Contracting

New Heat & Re-heat Solution

- Eliminated Central Boiler System
- Abandoned Failing Underground Hot Water Pipes
- Installed High Efficiency Point of Use Boilers (3 Buildings)
- Converted From Hot Water to Electric Heat (1 Building)

Pre-existing Central Boiler System   Point of Use High Efficiency Boiler
Guaranteed Energy Performance Contracting

**Airside System Upgrades**

- Total Building VAV Retrofit
- Air Handler Replacements
- Variable Frequency Drive Installations
- Building Controls Upgrades and Optimization
- Drop Ceiling Replacement

![VAV, Controls & Ceiling Upgrade](image1)
![New Air Handler](image2)
Guaranteed Energy Performance Contracting

New Campus Chilled Water Plant

- Replacement of Distributed Air Cooled with High Efficiency Water Cooled Plant
- New Underground Pipe
- Campus-wide Controls Upgrade
- Individual Building Metering
Guaranteed Energy Performance Contracting
Guaranteed Energy Performance Contracting

Thermal Energy Storage Solution

Figure 1. Operating Strategies for TES
Guaranteed Energy Performance Contracting

Energy Information Kiosk

- Student and Staff Education and Information

Energy Performance Contract

In 2006, Valencia and Siemens entered into an agreement to complete an in-depth energy study with the intent of developing a project that would produce a significant amount of energy and dollar savings for the college.

As a result of the study and the ongoing partnership, Siemens is currently implementing many of the projects that were developed.

Energy Savings & Environmental Impact

With increasing energy costs, and dwindling resources, it is more important than ever to increase efficiency. As a result of the West Campus Energy Performance Contract, we will achieve the following annually:

3,104,142 kWh Energy Savings

The highlight of this partnership with Siemens is that the energy reductions are guaranteed for the next 20 years!

The annual savings are equivalent to:

- 2,440 Acres of Forest Preserved
- 637 Cars Removed from the Road
- 6,808 Oil Barrels not Burned

Learn More
Guaranteed Energy Performance Contracting

Energy Information Kiosk

• Student and Staff Education and Information

Energy Performance Contract

In 2006, Valencia and Siemens entered into an agreement to complete an in depth energy study with the intent of developing a project that would produce a significant amount of energy and dollar savings for the college.

As a result of the study and the ongoing partnership, Siemens is currently implementing many of the projects that were developed.
Measuring the Results
Measuring the Results

Total West Campus kBtu/sf/yr
Year One

- Total Campus Baseline: 113
- Total Campus Current: 75
- Future Target: 68
- Typical Education Building: 75
Measuring the Results

kWh Per Sq Ft - VCC West Campus

<table>
<thead>
<tr>
<th>Date</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
<th>Vs. Prev.</th>
<th>Vs. 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year Ending 12/31/06</td>
<td>21.69</td>
<td>25.79</td>
<td>22.23</td>
<td>24.41</td>
<td>26.84</td>
<td>29.24</td>
<td>29.50</td>
<td>29.47</td>
<td>29.79</td>
<td>28.85</td>
<td>25.59</td>
<td>21.44</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year Ending 12/31/07</td>
<td>20.55</td>
<td>22.43</td>
<td>20.74</td>
<td>23.49</td>
<td>23.38</td>
<td>27.50</td>
<td>30.99</td>
<td>31.57</td>
<td>29.85</td>
<td>30.59</td>
<td>26.62</td>
<td>27.07</td>
<td>26</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Year Ending 12/31/08</td>
<td>21.62</td>
<td>23.41</td>
<td>16.19</td>
<td>18.95</td>
<td>18.22</td>
<td>21.71</td>
<td>22.71</td>
<td>24.82</td>
<td>23.01</td>
<td>21.90</td>
<td>17.64</td>
<td>17.88</td>
<td>21</td>
<td>-21%</td>
<td>-20%</td>
</tr>
<tr>
<td>Year Ending 12/31/09</td>
<td>16.20</td>
<td>19.47</td>
<td>16.06</td>
<td>18.03</td>
<td>21.37</td>
<td>18.40</td>
<td>21.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>-0%</td>
<td>-28%</td>
</tr>
</tbody>
</table>
Measuring the Results

Actual Total $ for Electric Area

- Chart showing actual total $ for electric area over months from Jan to Dec.

Legend:
- Difference between 06 and 09
- Year Ending 12/31/06
- Year Ending 12/31/07
- Year Ending 12/31/08
- Year Ending 12/31/09
Measuring the Results

Actual Electricity kWh for Electric Area

- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

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Measuring the Results

Actual Electricity kW for Electric Area

- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

(500)
Measuring the Results

Actual Electricity kW for Electric Area

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Difference between '06 and '09
Year Ending 12/31/06
Year Ending 12/31/07
Year Ending 12/31/08
Year Ending 12/31/09
Measuring the Results

West Campus Dollar Savings

<table>
<thead>
<tr>
<th>Total Dollars</th>
<th>Guarantee Savings</th>
<th>Actual Savings</th>
<th>Excess Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$21,317</td>
<td>$37,267</td>
<td>$15,891</td>
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<tr>
<td>$10,000</td>
<td>$27,167</td>
<td>$47,463</td>
<td>$20,456</td>
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<tr>
<td>$20,000</td>
<td>$29,145</td>
<td>$32,611</td>
<td>$3,400</td>
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<tr>
<td>$30,000</td>
<td>$30,136</td>
<td>$18,564</td>
<td>-$11,552</td>
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<td>$40,000</td>
<td>$31,069</td>
<td>$32,956</td>
<td>$1,467</td>
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<tr>
<td>$50,000</td>
<td>$28,067</td>
<td>$29,540</td>
<td>$573</td>
</tr>
<tr>
<td>$60,000</td>
<td>$29,755</td>
<td>$33,992</td>
<td>$4,237</td>
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<td></td>
<td>$29,015</td>
<td>$34,561</td>
<td>$5,547</td>
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<tr>
<td></td>
<td>$28,025</td>
<td>$42,311</td>
<td>$14,286</td>
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</table>

$254,635 Total

$309,006 Total

$54,370 Total
Measuring the Results

<table>
<thead>
<tr>
<th>Energy Savings Equivalent Dollar Details by Guarantee Type</th>
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</thead>
<tbody>
<tr>
<td>Building FIM</td>
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<tr>
<td>----------------</td>
</tr>
<tr>
<td>CEP</td>
</tr>
<tr>
<td>SSB</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2-3-S</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>Totals</td>
</tr>
</tbody>
</table>

For Year 1 - First Quarter (9/01/08-11/30/08), the following describes the breakdown of the savings:

<table>
<thead>
<tr>
<th>Savings Description</th>
<th>Actual Savings</th>
<th>Guarantee*</th>
<th>Excess/Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Savings</td>
<td>$ 85,117</td>
<td>$ 57,242</td>
<td>$ 27,875</td>
</tr>
<tr>
<td>Gas Savings</td>
<td>$ 27,133</td>
<td>$ 16,655</td>
<td>$ 10,479</td>
</tr>
<tr>
<td>Modeled Savings</td>
<td>$ 3,752</td>
<td>$ 3,752</td>
<td>$ 0</td>
</tr>
<tr>
<td>Total Savings Cost Avoidance</td>
<td>$116,003</td>
<td>$ 77,649</td>
<td>$ 38,354</td>
</tr>
</tbody>
</table>

For Year 1 - Second Quarter (12/01/08-2/28/09), the following describes the breakdown of the savings:

<table>
<thead>
<tr>
<th>Savings Description</th>
<th>Actual Savings</th>
<th>Guarantee*</th>
<th>Excess/Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Savings</td>
<td>$ 50,734</td>
<td>$ 32,513</td>
<td>$ 18,221</td>
</tr>
<tr>
<td>Gas Savings</td>
<td>$ 7,656</td>
<td>$ 39,397</td>
<td>- $ 31,741</td>
</tr>
<tr>
<td>Modeled Savings</td>
<td>$ 18,282</td>
<td>$ 18,282</td>
<td>$ 0</td>
</tr>
<tr>
<td>Total Savings Cost Avoidance</td>
<td>$76,672</td>
<td>$ 90,192</td>
<td>- $ 13,520</td>
</tr>
</tbody>
</table>

For Year 1 - Third Quarter (3/1/2009 – 5/31/2009), the following describes the breakdown of the savings:

<table>
<thead>
<tr>
<th>Savings Description</th>
<th>Actual Savings</th>
<th>Guarantee*</th>
<th>Excess/Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Savings</td>
<td>$ 77,043</td>
<td>$ 53,657</td>
<td>$ 23,386</td>
</tr>
<tr>
<td>Gas Savings</td>
<td>$ 16,580</td>
<td>$ 15,897</td>
<td>$ 684</td>
</tr>
<tr>
<td>Modeled Savings</td>
<td>$ 17,241</td>
<td>$ 17,241</td>
<td>$ 0</td>
</tr>
<tr>
<td>Total Savings Cost Avoidance</td>
<td>$110,864</td>
<td>$ 86,795</td>
<td>$ 24,070</td>
</tr>
</tbody>
</table>
Measuring the Results

Performance Contract Financial Facts

- $13.5M in Capital Construction
- $900K per Year in Guaranteed Energy Savings*
- 20 Year Guarantee
- $18M in Total Guaranteed Savings*
- Currently Exceeding Guaranteed Savings Plan by 20%
- Current Goal of $1M in Annual Savings

* Average Dollar Equivalency Based on Cost of kW, Kwh, Therms & kGal Water Saved
Measuring the Results

### Annual Reduction

<table>
<thead>
<tr>
<th>CO₂ Emissions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>9,095,664</td>
<td></td>
</tr>
<tr>
<td>Natural Gas</td>
<td>865,919</td>
<td></td>
</tr>
<tr>
<td>#2 Fuel Oil</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>#6 Fuel Oil</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9,961,584</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Other Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOₓ</td>
<td>13,668</td>
</tr>
<tr>
<td>SO₂</td>
<td>22,842</td>
</tr>
</tbody>
</table>

### Total Project Term

<table>
<thead>
<tr>
<th>CO₂ Emissions</th>
<th>in pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>181,913,287</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>17,318,387</td>
</tr>
<tr>
<td>#2 Fuel Oil</td>
<td>0</td>
</tr>
<tr>
<td>#6 Fuel Oil</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>199,231,675</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Pollutants</th>
<th>in pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOₓ</td>
<td>273,368</td>
</tr>
<tr>
<td>SO₂</td>
<td>456,634</td>
</tr>
</tbody>
</table>

**CO₂ Equivalencies: Total Project Term**

- **637.5** Acres of forest preserved from deforestation
- **478.1** Railcars of coal
- **16,557.1** Cars driven for a year

*Source Of Data*
Summary
Summary

• Identify Challenges
• Quantify & Measure: Establish Baseline
• Build Internal Support
• Develop a Plan
• Engage Industry Partners to Help with the Heavy Lifting
• Quantify & Measure
• Report Results
Q & A / Discussion
For More Information Contact:

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