**Energy Conservation Initiative (ECI) Project Summary**

**Steam Pipe Insulation Repair and Replacement**

**What We Did**
Surveys of mechanical rooms in buildings were completed to identify areas where insulation could be improved cost effectively. We then replaced worn or missing insulation in 64 mechanical rooms throughout the academic, research and teaching buildings and campus life facilities.

**What It Cost**
*Academic research and teaching buildings* — $345,000  
*Campus Life Facilities* — $30,000.

**How Long It Took**
16 months

**What We Saved**
$290,000 per year at the billed utility rate, yielding a 1.2 year payback.

**Description of Photos**
One of the many steam components insulated during the steam pipe insulation project. Insulating the Steam PRV (pressure reducing valve) saves the equivalent energy that would heat a typical one family home for two months.

The insulation project has made the mechanical rooms much more comfortable and safer to work in, while creating significant energy savings.

Rick Bishop, General Foreperson  
Control shop

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**Steam Pipe Insulation Repair and Replacement: ECI Savings Table**

<table>
<thead>
<tr>
<th>Utility</th>
<th>Historical Energy Use (MMBtu)</th>
<th>FY 2011 Energy Use (MMBtu)</th>
<th>Energy Savings (MMBtu)</th>
<th>% REDUCTION</th>
<th>Historical Cost (billed rates)</th>
<th>FY 2011 Cost (billed)</th>
<th>Savings $</th>
<th>Equivalent # Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steam</td>
<td>1,084,000</td>
<td>1,072,500</td>
<td>11,500</td>
<td>1%</td>
<td>$26,400,000</td>
<td>$26,110,000</td>
<td>$290,000</td>
<td>100</td>
</tr>
<tr>
<td>Electric</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Chilled Water</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>1,084,000</td>
<td>1,072,500</td>
<td>11,500</td>
<td>1%</td>
<td>$26,400,000</td>
<td>$26,110,000</td>
<td>$290,000</td>
<td>100</td>
</tr>
</tbody>
</table>

**Infrared**

**B E F O R E Insulation** - Surface up to 260°F  
**A F T E R Insulation** - Surface down to 98°F

**Total Campus Heating Sales & Energy Use • Pre & Post ECI**

**More Information**
energyandsustainability.fs.cornell.edu  
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