

Sustainability Success Story

Piping Insulation Gives Improved Control and Savings

The Challenge

In our Institute of Sustainable Horticulture field labs we have a number of different types of heating systems serving a variety of areas including classroom, shop (equipment and propagation), greenhouses, and office. The result was a number of glass greenhouses and plant propagation workshops are heated by hot water from boilers about 30m away.



The area itself had significant uninsulated piping. This resulted in this area overheating in warm weather, with overhead windows needing to be opened to compensate. This combination meant uncomfortable people and plants were wasting energy.



Our Solution

We insulated almost 200 Meters of piping in the main work area and in the gallery (photos).

The gallery (common area between greenhouses) was a separate heating regime and had different temperature requirements from the greenhouses. Independent control of heating in this area was achieved by installing 2 new thermostatically controlled fan forced heaters and a thermostat.

Project Cost, Annual Savings and Other Benefits

<i>Cost</i>	\$5,600
<i>Savings – Dollars</i>	\$1,900
<i>Savings - Natural Gas (GJ)</i>	180 GJ (about ½ % of our total consumption)
<i>Simple Payback / Return on Investment (ROI)</i>	3.0 years / A Return on Investment of more than 30%
<i>Environmental Improvement - Greenhouse Gas Reduction</i>	10 Tonnes
<i>Other Benefits</i>	Better process control ability for plant growth. Greater comfort for staff in greenhouse working area. Small reduction in electrical use