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Background: PAH have been carrying out a series of Renewable and Sustainable Energy Projects carried out from 2004 to present day. This project was driven by a need to reduce energy spend which was set to rise from £1 million to £1.5 million due to rising national energy costs. A grant of nearly £400,000 was secured from the Department of Health's Energy Fund in 2007 and work started installing two new energy efficient boilers and solar panels in summer 2008.

Solar panels were installed on both the main building and Jenny Ackroyd Block. The Main roof installation provides the lower Kent wing with preheated water and the Jenny Ackroyd installation provides preheated water to the whole Jenny Ackroyd Block.

The solar panel system uses the sun and thermal energy from the atmosphere to heat the tubes which collect the energy and then heat an inner tube which has an aluminium foil and copper rod. This heats up a fluid running across the inside of the collector which in turn heats up and passes through at a high temperature.

It is then fed back through a plate heat exchanger to the collector tank and feeds preheated water into hospital water system. Even on a rainy day and in the winter, the panels will be able to collect the thermal energy from the atmosphere so the Trust will be continually serviced.

Savings:

Main building

20 collectors gives 34.6 Mega watt hours = saving of 3894 cubic meters of Gas, and 8236kg of CO2 per annum.

Jenny Ackroyd

18 collectors gives 31.14 Mega watt hours = saving of 3504 cubic meters of Gas, and 7412kg of CO2 per annum.

Related actions:

Upper Kent wing plant room lagging has been completed and thermal jackets fitted to all valves.

The plant room lagging in the Jenny Ackroyd Block was also looked at. The lagging has been applied to entire plant room and thermal jackets fitted to all valves.