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Communications Department
Tel: 01225 82 5849/5799/6230/1299communications@ruh.nhs.uk
www.ruh.nhs.uk

Media Release

A new energy centre at the RUH

The Royal United Hospital is combining its heating and power systems to save huge amounts of otherwise wasted energy and make a massive saving.

The hospital has invested £5million in creating a new energy centre, installing the latest combined heat and power technology, which will result in a considerable, annual saving on energy bills of around £700,000 and reduce annual primary carbon emissions by 3,000 tonnes.

Andy House, Head of Estates for the RUH, says: "The hospital depends on a lot of energy-hungry plant and equipment for heating, ventilation and hot water. The old boilerhouse equipment is over 30 years old and its design, control and monitoring equipment was inefficient and becoming increasingly unreliable and costly to repair.

"It was installed when energy efficiency wasn't a priority, but with the cost of energy rising dramatically, we need to avoid the risk of costs escalating out of control. By modernising the main boilerhouse and using a combined heat and power system, or CHP, we will significantly reduce our running costs."

Now a 2000 kW gas fuelled electricity generator is at the heart of the new energy centre. It is housed in an enormous 'sound proof' box, generating electricity whilst capturing useable heat from its exhaust gas. Three new steam boilers have been delivered to the site, one of which uses the generator's exhaust gas. All three can also be fuelled with gas or gas oil in the event of a supply interruption.

The concept of combined heat and power is to use as much of the energy in the gas fuel as possible. As the electricity is being generated on site, it avoids efficiency losses incurred through transmission and distribution of electricity through the National Grid network – as energy is lost travelling long distances to reach its end user. The RUH expects the CHP to be 70% efficient whereas most power stations are only half of that.

A temporary boiler plant is currently providing the hospital's heating and electricity needs until the installation of the new energy centre is completed in November.

Andy says: "The only visible change that people may notice will be a slightly 'fatter' and shinier chimney flue. But the most significant change will be visible to those who organise the payment of our utility bills!"

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