



Department of Energy & Climate Change

Non-Domestic RHI Case study – Fast facts

Technology type:	Biomass
Equipment manufacturer:	Fröling
Equipment model:	Fröling Turbomat 500
Capacity:	500kW
Energy consultant:	Sustainable Energy
Installer:	Mitie Engineering



Companies House slashes gas bills in pioneering move

Scenario

Companies House is an executive agency of the Department of Business, Innovation and Skills (BIS). Its main functions are the incorporation, re-registering and dissolving of companies as well as the distribution of company information to the public. Keen to reduce its carbon footprint, in 2008 it installed additional roof insulation in its 29,000 square metre Cardiff office. In 2010 Companies House decided to replace its aging gas boiler with a biomass boiler in a bid to save money on energy bills and to lower its CO₂ emissions.

The 500kW Fröling biomass boiler needed its own boiler house and a silo to store its fuel – sawdust pellets which are locally-sourced to minimise the environmental impact. This system cost £150,000 and was part of a £450,000 overhaul of the department's heating system. The work required the removal of three old boilers and the installation of two new back-up gas boilers. A feasibility study undertaken by renewable energy consultants Sustainable Energy found that Companies House had

enough outside space for the silo and that the new boilers would fit into the existing boiler house. Equally importantly, there was enough access space for the lorries that bring deliveries of pellets every two weeks.

“As a government agency we want to lead by example in meeting government carbon reduction targets,” says Gareth Leek, Environmental Manager at Companies House. “The boiler has helped us to reduce our carbon footprint by 25 per cent ahead of schedule and we realised that replacing our 17-year-old gas boiler was a good way to help us to save carbon and money. We presented our Board of Directors with the option of a new conventional gas boiler and a biomass boiler with gas back-up. After seeing the business case for each they chose the greener option.”

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Gareth Leek, Environmental Manager at Companies House

Leading the way

The new boiler system was installed by Mitie Engineering between May and September 2011 and began operation in October. The 40-year-old building's existing network of pipes and radiators was left untouched, so even though it was a lengthy installation, Companies House's 1000-strong workforce was undisturbed throughout the process.

Companies House was the first BIS agency to install a biomass energy source, and it has attracted a lot of attention as a result. Representatives from several other public bodies have visited to find out more about how biomass energy works in practice, making the installation something of a showcase. The boiler is not the end of Companies House's carbon reduction measures, as the agency has also installed smart lighting in its office. This low-energy lighting dims in bright light and is sensitive to motion and footfall, turning itself off if a room or corridor is unoccupied. The agency is looking into installing an array of solar panels to reduce its electricity costs.

"The organisation has been impressed with the performance of the system," says Tim Moss, Chief Executive and Registrar of Companies for England and Wales at Companies House. "It provides clear evidence that effective environmental management is also good business management."

Worth the effort

Since the boiler was installed, gas heating bills at Companies House have gone down from around £55,000 a year to £10,000 a year, with restaurant facilities and back-up boilers accounting for this spend. The agency is also saving 250 tonnes of carbon each year. In January 2012, Companies House applied for payments through the Government's Renewable Heat Incentive (RHI) scheme.

This scheme was launched in late 2011 and is part of the Government's commitment to increasing renewable energy use in the UK. The RHI scheme offers long-term financial support to companies and householders for installing renewable heating instead of fossil fuel heating. Payments are made over a period of 20 years and reflect the amount of energy used. The agency receives £25,000 a year from RHI and this funding, combined with the substantial annual savings on gas, will recoup the investment on the biomass boiler by 2017.

"We're all very conscious of the rises in energy prices," says Gareth. "We estimate that if we didn't have the biomass boiler our gas bills would increase up to £80,000 a year in a few years. There's no difference in temperature in the office, even in very cold weather, because the back-up gas boiler comes into action then to supplement the heat generated by the biomass heater. The only real difference to our operation is the fact that the boiler needs more maintenance checks than a gas boiler. The savings, in both money and carbon, are worth it though."

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For more details on the non-domestic scheme and free information on how to apply visit: **www.ofgem.gov.uk**

· Or call **0845 200 2122** (RHI enquiry line open Monday to Thursday 9am-5pm and to 4.30pm on Fridays).

If you are interested in receiving RHI updates or providing DECC with RHI feedback, please email: **rhi@decc.gsi.gov.uk**

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