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Cardiff-based Companies House Leads With Biomass Technical Development - Government Environmental Agenda

1. Two years ago, the Companies House (CH) Executive Board initiated a feasibility study to identify new-technology heating options and solve a number of demanding challenges- capital cost and return on investment, environmental commitment, and, of course, a comfortable working environment for over 1,000 staff, tenants and visitors.
2. The existing boiler system at the Cardiff HQ, supporting a large tenancy and a 29,000 square metre office environment, was clearly coming to the end of its useful life. So, while there was a pressing need for a replacement, there was also the opportunity to take an environmental lead with the right product.
3. Expert recommendations suggested that a biomass boiler combined with a gas back-up mix would answer all the key demands, with a system very much at the cutting edge for commercial-scale heating technology. CH was pleased to engage the services of specialist Cardiff-based consultancy, **Sustainable Energy Ltd.** This local team of experts provided us with hands-on support to deliver the project – by designing the system and managing and commissioning the installation of the plant - as well as providing on-site training.
4. CH is in fact the first within the **Business Innovation & Skills Department (BIS)** to install biomass heating and believes that this gives a practical, supporting signal to innovative technology and beneficial investment. The 500 kilowatt biomass boiler, retrofitted into the existing boiler house and fully integrated with the heating system, is set to provide substantial year-on-year savings for the tax payer. With the capital outlay of £450,000 for full heating scheme replacement, CH estimates that it will achieve a full return on investment for the tax payer within seven years. The biomass system will also soon benefit from the **Renewable Heat Incentive (RHI)**, a 20-year guaranteed government subsidy. In hard terms that means instead of spending approximately £40k on annual fossil fuel, CH will be spending around £10k on biomass fuel when factoring in the added income from the RHI. The RHI is available to all businesses, whether public or private sector, and makes conversion to renewable heating viable for many businesses that would otherwise find it financially impractical to meet the high initial costs and run-in period before realising long term savings.

5. Environmentally, biomass offers significant CO₂ reduction as a heating fuel, thus vastly improving CH's carbon footprint. CH will be burning specially prepared, virgin wood pellets from sustainable sources which are delivered by lorry to fill a large storage silo on site. The only significant bi-product is ash. However, the system is so efficient, that for every tonne of pellets burned only five kilograms of ash is actually produced. This potash will be available to staff for their gardens; although there will be a long wait to satisfy all budding horticulturalists!
6. As to the human factor in all of this, it would not be unfair to say that prior to the new system being installed, CH struggled to maintain a balanced temperature for staff using the conventional heating system. That all changed in October 2011, with the completion and commissioning of the biomass heating system, which proves that best practice design and delivery has not only improved the environmental status of CH, but also the operation and working conditions. It is now being used to effectively serve the winter heating demands and the operators are engaged in balancing the system and learning about how it works to peak performance.
7. CH is currently welcoming a number of site visits from interested parties in the government, technology and business fields, wanting to see at first hand how the full facility operates. It has certainly taken the good-old-fashioned boiler room to a whole new technological level, with a high standard of engineering, software integration and sustainable fuel supply.

For more information from **Companies House** - <http://www.companieshouse.gov.uk/>

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