

Case Study

McVeigh technical Solutions
Commercial Property



Project Value – £45k

Completed – February 2012

Challenge

When local businessman Gary McVeigh approached Envirogen with concerns over his company's carbon footprint we were only too happy to provide a solution to his needs. McVeigh Technical Solutions Ltd is a national provider of mechanical building services installations to a broad sector of blue chip clients. Being an Executive Committee member of the B&ES, Gary was well aware of the need for businesses to reduce their carbon footprint as part of the governments Carbon Reduction Commitment and wanted to do his part to meet the targets as set out under the commitment. Having discussed the requirements for McVeigh technical solutions we set about a design based on the building and produced a consumption model of the business.



Solution

Having based our design on the building and its consumption our design team provided a solution which would benefit McVeigh Technical Solutions both financially in the form of feed in tariffs and in energy saving compared to the technologies currently being employed. The design involved the installation of an air source heat pump to replace the existing G rated boiler which offers an SCOP of 2.4 compared to the existing boiler with an efficiency of 0.8. The Daikin Altherma heat pump system was coupled with a solar thermal solution which offers 1703kWh of energy transferred to the building hot water annually. This represents 70% of the hot water requirement at SAP 2009 conditions.



In addition to the heat pump system we also specified a bespoke solar Photo Voltaic solution. With the building being for commercial use it is possible to install as much Solar PV as is physically possible within certain guidelines however the solution to Gary was not one of income but of sustainability. The aim is to operate the business at minimal cost in order to cut overheads and add value to the business. A 3.84kWp solar PV array was specified consisting of 16 Solar panels and providing an estimated annual yield of 3062kWh of electrical energy to the building with an approximate annual financial benefit of £875.00. With all the figures such as Feed in tariff and electricity savings considered the system has an estimated payback period of seven years.

