CASE STUDY

RENEWABLE ENERGY FEASIBILITY STUDY: BARRHILL COMMUNITY INTEREST COMPANY

- Technical feasibility study looking at renewable energy options
- Consideration of woodchip, wood pellet, air source heat pumps and photovoltaics
- Technical / financial assessment and preliminary system design
- Annual financial savings of up to £10,500 and carbon savings of up to 90% identified

ESP was asked by Barrhill Community Interest Company in Ayrshire, Scotland, to complete a technical feasibility study looking at the options for installing a renewable energy heating system to heat the village hall and primary school. Technologies considered included woodchip and wood pellet boilers, air source heat pumps and photovoltaics.

Energy consumption at the site, which currently uses electric storage heaters, was determined, and the technical viability of installing each renewable technology evaluated. Preliminary designs were then produced for wood pellet, woodchip and air source heat pump systems, including the fuel store and fuel handling system for biomass options.

Following consultation with the Barrhill Community Interest Company, members of the local community and the Forestry Commission Scotland, it was concluded that a 70kW woodchip boiler with a subterranean fuel store was the preferred solution. This would provide space heating and hot water to the village hall and primary school via district heating pipework and new wet distribution systems. Heat meters for each building would enable individual billing.

Cash flow analysis indicated that annual savings of over £10,500 (compared to an oil-fired system) would be possible, with an annual carbon reduction of up to 90%.

BESPOKE DESIGN

Each installation is designed to meet specific client requirements with full computer simulation used to prove all designs.

ENERGY EFFICIENCY

As approved Carbon Trust Consultants, we will ensure that the system energy performance is optimised to produce lower operational costs.

PROJECT CDM AND MANAGEMENT

Our engineers and consultants will ensure that all aspects of the design and installation are fully compliant and all relevant permissions and safety requirements are fully adhered to.

MCS ACCREDITED

ESP is an accredited installer, approved under the Government's Micro-generation Certification Scheme.

CARBON TRUST

ESP are approved Carbon Trust Energy and Biomass Consultants.

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