

CLAN House Solar Thermal Solar PV and Air Source Heat Pumps

Introduction

CLAN was set up in 1983 as a support and self-help group for people affected by cancer: the hospital treats the cancer but where would people go for the emotional support? To cope with the ever expanding need for CLAN's services, their vision was to build a new cancer support centre and accommodation facility. They wanted to create an environment that was accessible, peaceful, warm and welcoming and to do this in a way that identified and addressed all their clients' needs. These improvements to their services would result in more positive outcomes for their clients, including the reduction of waiting times, greater access to information and an increased capacity for accommodation, counselling, complementary therapies and their specialised therapeutic service for children, young people and their families.

All current and future clients would benefit from this much needed new facility, as well as staff and volunteers. A new energy and cost efficient building would allow them to help more and more people who are affected by this life threatening illness.



Equipment

8kW Varisol DF-10 Evacuated tube solar collectors, 15kW TeinWei Solar PV and a 10kW Daikin Air Source Heat Pump

The potential fuel savings will ensure continued operation of the facility, as economically as possible.

- Solar thermal panels on the roof for domestic hot water heating, serving the offices and Haven. Comprising roof panels, pumps and control module and storage unit with secondary heating coil.
- Air source heat pump provides heat to the conservatory and lounge, simultaneous cooling rejects heat to the hot water storage via a heat pump with an annual average COP of 3.7.
- Solar PV panels on the roof to provide electricity for the building, with excess electricity sold to the grid.

A two-stage tendering process, following the Code of Procedure, was adopted to enable the project to remain on programme, but still maintain the competitive nature of the tenders. The services specialists were chosen from an approved list, and the competing main contractors were asked to approve and vice-versa. The specialist performance specifications were issued for design and price, and the successful specialists were incorporated into the main contract once checked and analysed as sub-contractors. Aberdeen City Council agreed a 175 year lease for the Park House site on Westburn Road, AB25 2QA. Planning permission, conservation area consent and building warrant were all received before any work was started.

Cost and Grant Funding

Total Project cost	£ 90,162	The remaining funding was obtained through unrestricted income for the new build project through public and corporate donations; legacies; fundraising events and pledges.
CARES grant	£ 68,306	
CARES grant percentage	75.00%	

This project has been funded by the Scottish Government's Community and Renewable Energy Scheme (CARES).

Fuel Bill Savings

As this is a new build project, like for like comparisons cannot be carried out, however the estimated running cost for the whole building is expected to be reduced by 10% due to combined effect of the renewable technologies.

Emission Savings

Estimated kWh savings p.a.	25,202
Annual CO ₂ savings (kg)	4,788
Lifetime CO ₂ savings (kg)	119,700



Project Monitoring

Monitoring of the installation will be carried out by CLAN's Facilities Manager, with the support of our Services Consultant and Design and Build Sub-Contractor. Annual maintenance contracts, where relevant, will be taken out by CLAN for all renewable installations.

Local Impact

Clan house said:

“Many people comment on the highly visible solar panels which demonstrate our sustainable building approach. We hope that this will encourage other organisations to follow the greener path and we would be happy to discuss this with others who were interested in installing. Furthermore, the savings made will enable CLAN to direct more income to support people affected by cancer”.

Lessons Learned

It made a big difference to have a general understanding of the technologies in house, nothing too technical, just a basic of which technology is doing what. Also key to investigate and understand the various feed in tariffs and grants which are available at any one time, and how long they will be available for! In terms of the installation everything went to plan from our view because the design and installation team resolved problems as they arose. More lessons will be learnt as the project matures but the key seems to be having a good relationship with the design and installation team.

For further information, contact

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