

Lakeside YMCA: Low Carbon

RCEF Stage: 1



Heat Exchangers and main plantroom



Key Facts

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| Land | Ownership within the YMCA. |
| Grid | Sufficient grid capacity to move to a 60 kW Water Source Heat Pump. |
| Finance | High capital cost major barrier and Community Benefit Society models for heat are still too difficult for most groups to take on. |

The Story

The stage 1 work suggested that Fylde Coast YMCA could fit 300 PV panels on their Lakeside facility at Lake Windermere to generate over 90,000 kWh of electricity. Most of the power could be used on-site, reducing the YMCA's fuel bills and carbon emissions. The panels could be owned by the YMCA or they could enter into a partnership with a Community Energy Society. YMCA Humber has recently completed a similar scheme in partnership with Grimsby Community Energy. These PV arrays could also heat hot water, possibly in conjunction with air source heat pumps. The study also looked at replacing the oil heating in the North Camp at Lakeside with a water source heat pump using heat from Lake Windermere. The budget quote was £85,000 for a 60 kW closed loop water source heat pump system. This would comprise of four 15 kW Kensa Evo heat pumps - two for the Windermere house and two for the dining room. It was found to be more economic and efficient to install the heat pumps in pairs or as a set rather than individually.

Key Figures

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|---------------------------|------------------------------|
| Project size: Tech type | 60 kW WSHP + 110 kWp PV |
| Energy Generation | 525MWhs + 92MWs |
| Private finance leveraged | £85,000 + £100,000 |
| CO2 savings | 130 Tonnes pa + 21 Tonnes pa |
| RCEF grant | £13,800 |

Challenges & Risks

With the Renewable Heat Incentive gone, it is difficult for charities, like Lakeside, to warrant the high capital cost of replacing existing functioning (even if old) oil boilers with low-carbon alternatives. Even with good intentions, there are many other demands on scarce financial reserves – especially post-Covid.

Further notes

LEP area: Cumbria

Link for further info: lakesideymca.co.uk

Lessons Learned

Revolving funds or low-interest loans that allow the high capital burden of low-carbon technologies to be spread in a 'pay as you save' model would allow many small charities or businesses to upgrade inefficient and carbon-intensive heating systems.