

Water of Leith Hydro Collaborative Communities Feasibility

Introduction

In 2005 an initial and broad based hydro feasibility study for the Water of Leith was commissioned by Edinburgh City Council. The study identified five potential schemes that were worthy of further investigation. Four local communities: Leith, Balerno, Kirknewton and Dean Village, in partnership with Edinburgh Council, approached Community Energy Scotland (CES) with a view to further investigating and exploring the potential for viable hydro schemes. These aforementioned communities recognised an opportunity to develop projects and to generate sustainable income for local community activities. Whilst all five sites each required detailed technical, environmental assessments and business appraisals, the suite of work was tendered as one project. CES acted as the project co-ordinator, bringing the separate parties together to form a loose project consortium. This collective and collaborative approach was aimed at reducing costs and the administrative burden to the groups, to increase networking amongst the groups, and to avoid any duplication of effort.



Whilst the initial early stage feasibility study had suggested a very good resource potential, when more detailed assessments were carried out some very significant physical and economic issues were discovered and identified at a number of the identified sites, which affected the viability of the schemes. For example, at the Dean Village information received from Scottish Water revealed that a sewer ran through the site of a proposed fish pass and powerhouse. This would mean the costs of re-routing this sewer would need to be included in the project civil costs, thereby rendering it financially unviable.

In terms of economic issues encountered by the consortium, the UK Government's Feed-in-Tariff (FiT) cannot be given to individuals or organisations that receive Government funding towards the capital costs of their schemes. Therefore the groups looking at Water of Leith projects would have to raise the finance from borrowing or private sector finance in order to ensure that their projects were FiT compliant. The viability of several of the schemes was already marginal, and when interest rates charged by private lenders were added to the financial modelling, it meant that these projects could not be realised unless they could:

- Find a way to reduce the capital costs of their scheme(s)
- Find a private grant funder willing to award funding towards the project
- Find individuals or organisations to invest equity into their scheme with a low rate of return, thus making the project viable.

Of the five schemes studied and modelled, Harlaw Reservoir showed the greatest potential for investment and is being taken forward by Balerno Village Trust. Their aim is to install a 66kW cross-flow turbine with a 45% capacity factor, and the project is currently (Feb 2012) seeking planning permission.

Cost and Grant Funding

Total project cost	£ 31,078 (or £6,215 per site)
CARES grant	£ 31,078
CARES grant percentage	100%

The Balerno Village Trust expects to spend a further £10k in gaining all necessary permissions and putting a grid connection in place. They are meeting this cost through a mixture of their own resources and CARES Loan funding. The capital cost of the scheme is expected to be around £300k, and the group have set up a Community Benefit Society to raise as much of the capital cost as possible through a community share offer.

Local Impact

The Water of Leith Project has generated a lot of interest, and as a feasibility project has provided the communities involved with the information they required to decide whether to progress with a project or investigate other opportunities. Whilst the findings for several sites have been disappointing, the groups involved have found it to be a useful capacity building and awareness raising exercise. From CES's perspective this was a useful collaborative working exercise. The local impact for Balerno once their scheme is installed will be significant, as annual income from the scheme is likely to be over £58k per year.

Lessons Learned

- Project costs can be significantly reduced by collaborating with other groups
- Desk based hydro analysis is very limited and often misses key showstoppers to a project
- Ensure that the consultants you choose are familiar in working with community groups and understand the need for good communication

Barry MacKay from Dean Village Association said:

"The proposed scheme in the Dean Village was an interesting project which looked feasible on initial assessment. CES were very supporting in facilitating and taking further the assessment of the site"

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