

Neen Sollars Community Hydro Project

Overview

The potential for a micro-hydro scheme at Tetstill Mill, Neen Sollars was recognised in the ETSU study¹ of 1989 and this view was reinforced in the DECC report of 2010² which indicated a cluster of opportunities in the same geographic area.

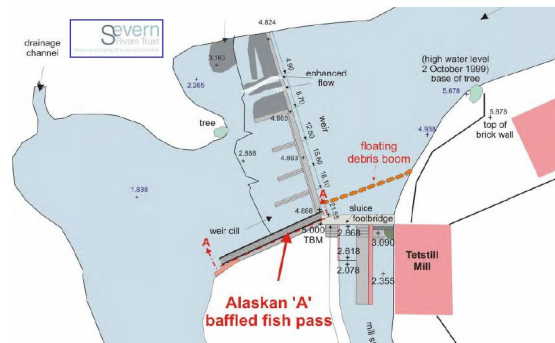
Sharenergy started work on reviewing the opportunities for hydro in the Rural Regeneration Zone (RRZ) during the winter of 2008 and was engaged with the Cleobury Country Environment Forum (CCFE) on a number of renewable energy prospects they were considering. It was not until the resources of Sharenergy were available that serious evaluation of a hydro scheme could be made.

Diary of progress with Sharenergy

Sharenergy started working on the development of hydro potential in the RRZ during the winter of 2008 and 2009; they had identified a cluster of around six sites to consider but they were each of very small scale compared to the large wind projects that made up Energy4All's experience to date. A new approach was needed to take account of the scale and the impacts this might have on viability and financial models.

In April 2009 a decision to support volunteers working on an aggregation of hydro projects was made with the expectation that five probable projects would emerge and warrant investment in their development.

The need for a 'fish pass' at Tetstill weir was already recognised by the local group because of its environmental benefit to wildlife and this was seen as imperative to a subsequent hydro scheme.



Over the summer the volunteer hydro team worked with Sharenergy and an invitation to tender for the feasibility of six sites was issued in July 2009 and by August a consultancy was appointed with the agreement of the local groups.

¹ Salford Civil Engineering (ETSU) - Small Scale Hydroelectric Generation Potential in the UK – 1989

² DECC / WAG, England and Wales Hydropower Resource Assessment, October 2010

By September 2009 Sharenergy was heavily involved in supporting the appointed consultants and the community groups in delivering the feasibility reports necessary to examine the case for a project.

CCEF, with the help of Severn Rivers Trust, secured funding from DEFRA for the fish pass at Tetstill weir in October 2009.

In November 2009 the Environment Agency (EA) was asked by the UK Government to carry out a review of the environmental consenting process for hydropower developments. There were concerns that small-scale hydropower developments were being held back by the need to obtain several separate permits and permissions for each scheme.

The draft feasibility report presented in December had concluded that all of the projects under review were technically feasible but the financial case would need testing. During January 2010 financial models were created but slow responses by essential consultees were delaying the testing of the model. Most noticeably it was the district network operators (DNO) that would not provide, or were slow to provide, information on connections to the grid and the estimated costs of connection.

Sharenergy had already drafted the specification for the next site-specific study that would take the project through detailed design, planning and permitting. This second study would provide:

- Detailed engineering drawings suitable for use by the civil engineering and technology contractor.
- Resolution of outstanding regulatory issues (predominantly the EA)
- Application for EA permits (impoundment, abstraction, etc;)
- Support of public meetings
- Support of landowner agreements
- Application for planning permission

When the brief was issued to consultants in March 2010 only two of the original six projects were considered strong enough to warrant this further investment. It was difficult to make this decision and Sharenergy relied on the support of its Management Group to make pragmatic choices based on which projects had the right ingredients necessary to make progress within the constraints of Sharenergy's resources and time limits.

The EA consultation to streamline its permitting process closed in July 2010.

In September 2010 the new fish pass at Tetstill weir was opened.



The Neen Sollars project is at such a scale (10 kW) that it was always going to be financially challenged and capital funding from other sources would be needed to make a co-operative model attractive. The financial modelling was further confounded as DECC were unable to give black and white guidance on whether grants and the feed-in-tariff (FIT) were mutually exclusive. The community itself appreciated the much wider benefits and implications of proceeding with the installation including its educational value.

During the autumn of 2010 there were ongoing discussions with the EA about permitting and by December this had come down to a single issue; the screen size that should be fitted. The EA also published its report following up on the consultation on permitting that it had carried out earlier in the year.

The local planning officer was also approached in December and gave verbal advice that planning permission for the hydro project would not be needed. However, making investment decisions based on a telephone conversation was deemed to carry some risk of a challenge later and so, ironically, an application had to be made in order to receive documental proof that planning permission was not required!

During February 2011 the project 'went public', launching its own website and appearing in the Shropshire Star under the following story.

South Shropshire turbine in place by autumn

Tuesday 8th February 2011, 5:33PM GMT.

A hydro-turbine designed to generate electricity from rivers could be in operation in south Shropshire by the autumn.

The £160,000 turbine is to replace an old water wheel on the River Rea at Tetstill Weir, at Neen Sollars, near Cleobury Mortimer.

Sharenergy, which helps communities build renewable energy schemes, and Cleobury Country Environment Forum are in the process of getting the final approval for the scheme.

The turbine would produce 10kW of electricity which is equivalent to about 20 per cent of the electricity used by the village.

Jon Hallé, project manager for Sharenergy, said: "We've been working with Cleobury Country Environment Forum on this for the last three years.

"We have applied for the final determinations and, if all goes to plan, we hope to start generating in autumn.

"It will be owned by a co-operative that we are setting up at the moment and local people will have the chance to buy shares in it. We are trying to do similar things in Ludlow and Shrewsbury."

In Ludlow, Sharenergy is working with Ludlow 21, Ludlow Teme Weirs Trust and residents to investigate the potential for the River Teme in Ludlow to generate electricity.

A feasibility study has been done and the group is now working on a detailed proposal.

February also saw the EA publish their simplified application forms on their website.

In March 2011 further press coverage on ShropshireLive.com conveyed the good news that the Neen Sollars Project had been awarded a grant of £3,000 from Shropshire County Council's Sustainability Team toward the costs of connecting the generator to the grid.

Lessons learnt

The scale of hydro schemes in comparison to the large wind turbine projects of Energy4All's experience demanded new innovations in the approach taken including the aggregation of a number of projects to gain economies of scale at the feasibility stage. This in itself brought the further challenge of assigning a fair share of the revolving investment fund to each project.

Small scale projects such as this one will never attract commercial investment and even the modest returns required by the Sharenergy co-operative model are unlikely to be achievable unless some capital (around 10-15%) can be brought in from other sources. This project is on the brink of realising their scheme and it shows that the vision and tenacity of community members can be enough to maintain momentum and deliver a project with a long term legacy.