



# Annual Report 2009

The first year of power generation by the UK's first community owned and funded micro hydro project



## Landmark dates in the year 2008 – 2009

- 19 Nov 08 Generation passes 50,000 kWh.
- 10 Dec 08 Second share prospectus launched to increase shareholding from £100,551 to £126,000.
- 17 Dec 08 Radius UK complete installation of the radio link to the Heritage Centre where a screen displays live generation details from the scheme. This installation was kindly donated.
- 19 Jan 09 Generation passes 100,000 kWh.
- 20 Jan 09 External power meter installed by Radius.
- 24 Jan 09 Simon O'Rourke completes his leaping salmon tree carving.
- 16 Feb 09 Hydraulic pump fails. 2 weeks to get Archie working again.
- 7 Mar 09 The final piece of the landscaping, a stone dressing, is completed.
- 31 Mar 09 Prospectus closes. Applications bring shares issued to 125,801.
- 6 May 09 Noise abatement order served by High Peak Borough Council.
- 4 July 09 Problems with the sluice gate become major: the bowing in the gate causes it to jam when shutting.
- 14 July 09 Lady Manners School from Bakewell are the first school to visit Archie in conjunction with local geologists, historians and the Environment Agency.
- 20 July 09 Generation passes 150,000 kWh.
- 12 Sept 09 Global warming - MV Beluga Fraternity navigates the Northeast Passage en route to Siberia.
- 26 Sept 09 Last "Torr's Tour" of the Summer concluded a season of popular free tours. Tours will resume next year.

## Successful Second Share Issue

The second share offer closed on 31<sup>st</sup> March 2009 with 43 share applications. Interestingly, 24 of these applications were from existing shareholders. Richard Body, the secretary, commented "We were surprised and delighted that so many shareholders were willing to increase their shareholding". All the applications totalling £25,250 were accepted by the board to increase the shares issued to 125,801. Torrs Hydro didn't seek publicity for the share offer, rather relying on their shares waiting list and word of mouth. We now have 230 shareholders (first named person on the share certificate) and 287 members (named on a share certificate).

## Volunteering with Torrs Hydro

'Lots of people have offered to help in a variety of ways', says Maggie Cole, director and volunteers coordinator. The Board of Torrs Hydro is delighted to have their involvement and is grateful for the support from High Peak CVS and Glossop Volunteer Centre in developing the volunteering policy for our organisation. Risk assessments have also been carried out to ensure the safety of volunteers in all the activities we ask them to carry out. Together these will ensure that everyone is able to access the information, support and supervision needed to enjoy the experience.



*Maggie briefs volunteers*

During the year about 20 volunteers have worked with us at one time or another mostly on the site and with the plant. We did plan to have a team of volunteers to carry out routine daily checks and other regular tasks on the plant. However, given the difficulties this year (see 'Power Generation and Plant Issues' on page 4) plant operation has not been straightforward, and the responsibility for checks and maintaining plant has been more than the Board has wanted to ask of volunteers.

Others have volunteered to help with the 'Torrs Tours'. There is a little more preparation of materials still to do before we can utilise them, but given the huge demand for guided visits, their help will be invaluable in the coming year.

Many of our volunteers have so far been older people but we do hope to attract younger volunteers now Maggie has made links with the 'V-Involved' project locally. This is a national initiative to encourage people in the 16-25 age group to volunteer in a wide range of organisations.

## Torrs Hydro attracts Huge Interest

Over the year directors have hosted at least 35 tours with representatives from over 30 groups and organisations, mainly from the Midlands and the North of England, as well as many individuals, visiting Torrs Hydro.

Visitors have included

- Voluntary and third sector organisations with a broad environmental interest such as the Energy Saving Trust, Groundwork Nottingham, Sustainable Bakewell, and Transition Town groups from Buxton and Chesterfield together with those with a specific interest in developing their own water power projects including Settle Hydro and CA2 Green Group in Carlisle.
- Educational visits have been arranged for Lady Manners School from Bakewell, Chesterfield Workers Education Association, and Sheffield and Manchester Metropolitan Universities.
- Local authority representatives have come from Derbyshire County Council, the Peak District, North Yorkshire Moors and Exmoor National Parks.



*Simon shows a U3A group around*

Torrs Hydro directors have been invited to speak to groups and at conferences. Invites have come from Penistone Friends of the Earth, the Mersey Basin Campaign, the Development Trusts Association (East Midlands Round Table on Community Assets), and nationally at the Plunkett Foundation's annual Rural Social Enterprise conference in November 2008 and the annual Cooperatives Congress in Windsor at the end of June 2009.

Torrs Hydro continues to attract media attention: BBC Northern Ireland, Derbyshire Life, the Manchester Evening News, Glossop Chronicle and the Sunday Telegraph have all provided media coverage.

A post-graduate student from Manchester Metropolitan University's Department of Environmental and Geographical Sciences has been undertaking a whole life assessment of the carbon in the Torrs Hydro scheme for his Masters degree in Environmental Management and Sustainable Development.

Torrs Hydro has featured in at least 2 case studies (that we know of):

- The Government's UK Renewable Energy Strategy 2009 (Department of Energy and Climate Change).
- The National Council for Voluntary Organisation's Sustainable Funding Project used Torrs Hydro to illustrate the potential for community investment in capital projects and the importance of choosing the right legal structure.

## Power Generation and Plant Issues

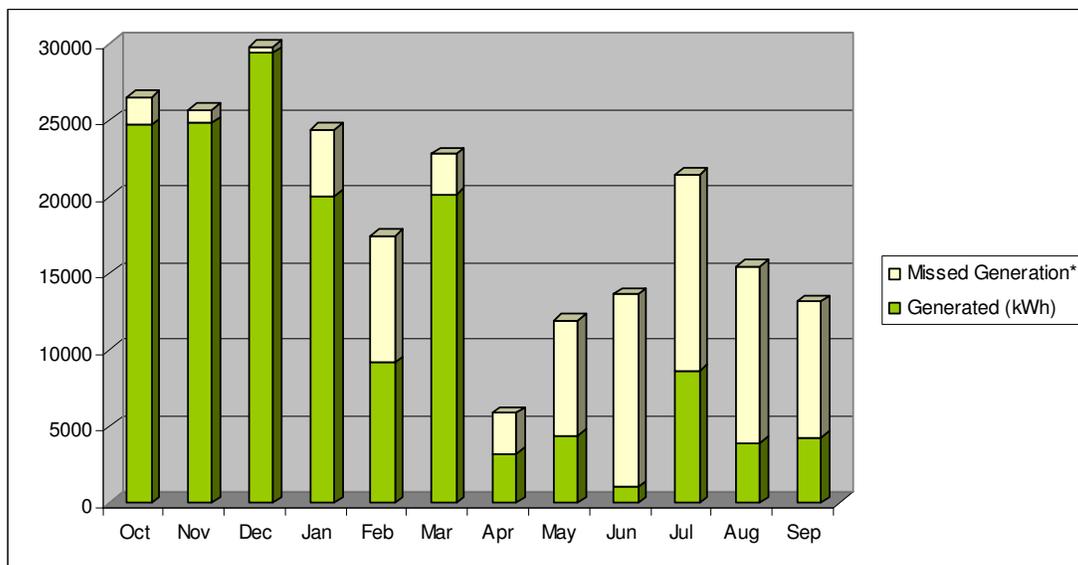
The plant was commissioned in early September 2008, so the year 1<sup>st</sup> October 2008 to 30<sup>th</sup> September 2009 is its first full year of operation.

During the first quarter of this financial year, the power generated was close to that predicted. This was very pleasing given that the plant was so newly commissioned and the difficulties encountered with the flash flood immediately after commissioning. Unfortunately all did not remain rosy. Substantial difficulties were encountered in the second half of the year and directors have been working extremely hard to resolve the problems.

Torrs Hydro obviously depends on water in order to generate power and when the water level in the river is low we produce less power. During the Spring and Summer, despite damp and overcast days, the rainfall has been at its lowest for at least 5 years.

In May High Peak Borough Council served Torrs Hydro with a noise abatement order. When the water level is low and the screw is producing less than 20kW the splash in the tail race produces a low frequency boom. Low frequency noise is very hard to remove and it is particularly noticeable at night. Because a condition of the planning consent is that the plant produces no extra noise, Torrs Hydro had no option but to manually turn the plant off between the hours of 10pm and 7am and also when the river water level is low. Modifications to the control system will enable switch-off to happen automatically when the water level becomes too low, and this adaptation will be tested in Autumn 2009. In the slightly longer term, Torrs Hydro are hoping to find a means of excluding the noise from the system.

There have also been issues with the reliability of the plant, which have seriously affected power production and which Torrs Hydro are taking active steps to remedy. The most key of these is that the sluice gate has proved not to be strong enough, and a local firm has been commissioned to strengthen it.



*Potential and actual electricity generated October 2008 – September 2009*

*\*Missed Generation: estimate of what could additionally have been generated without the problems'*

In total we generated 153,986 kWh in the year 1<sup>st</sup> October 2008 to 30<sup>th</sup> September 2009. We estimate that given the water level in the river we could have generated around 228,250 kWh if we had not encountered the noise and other plant issues. This means that even with the lower than average rainfall, over 74,000 kWh of power or about 33% of our potential energy was lost.

Also to note is that although the original plans gave our plant a peak power output of 63KW we have only seen a maximum of 54KW. The equipment has been checked and the cause is that the head (i.e. difference between the water levels above and below the weir) is lower than originally calculated. We have looked at the causes and possible solutions, concluding that we have to live with what we have and work with the river rather than against it.

## Financial Report for the Year 2008 – 2009

In our financial year from 1<sup>st</sup> October 2008 to 30<sup>th</sup> September 2009 we shall be posting another sizeable loss (c£18,000). This is caused by many construction and landscaping costs being included in this year's accounts (as noted in the annual report last year). The lower than forecast level of power generation has obviously had a financial impact. Our second share offer was vital to fund these costs. Our electricity generating income has been augmented by the Environment Agency paying us to keep the fish pass clean (£1,500pa), we have also earned over £1200 net from donations, our educational tours and speaking engagements. Only incurred expenses have been claimed for all of these events (Torrs Hydro representatives have not be paid). With the power generated amounting to £15,787, this additional earned income amounts to 15% of the total.

Our expenditure in the last year has been affected by the unreliability of the plant and this has led to higher than budgeted repair costs of £2310. Investigating the noise problem has also had direct costs to us of £1000. The insurance on the site is over £3,500. Most of the cost of insurance is the public liability cover because we are in a public park. Some good news is that we qualified for an 80% reduction on our business rates saving us nearly £900 a year. As planned, we took out a £70,000 loan from the Co-operative Bank repayable by monthly instalments over 10 years. The loan is with the Co-operative Bank and has been serviced as scheduled. We have paid back around £7,500 on the loan. In addition, we have built up reserves of £4,800 that were a condition of the loan.

The financial accounts will be available at the AGM, or shareholders can request a copy from the secretary from the date of the AGM.

## Looking forward to the Year Ahead

The coming year looks to be as busy as the last:

- We shall continue working with High Peak Borough Council to get the noise abatement order lifted. From 1<sup>st</sup> November, we will be trialling our initial solution to the noise by not running the system when the noise can occur. We shall then be working on a permanent solution to remove the cause of the noise.
- Following the success of the visits this year we will continue to develop and deliver our education programme, hoping to inspire other communities to tackle climate change issues locally, perhaps by building their own small scale hydro scheme, and promoting the community share method of owning and funding such initiatives.
- We shall resume our free “Torrs Tours” at weekends, where Torrs Hydro representatives are able to show people around the site and answer any questions.
- We also aim to build on our progress with volunteering and to involve more people in a wider range of volunteering opportunities.
- The Website is going to be relaunched, with more flexibility, much more content and the possibility of displaying real-time generating statistics similar to those displayed in the New Mills Heritage Centre.
- We are working with High Peak Borough Council and the Environment Agency to provide new signage and interpretation boards to inform visitors.
- We look forward to generating more electricity.



*Sean explains a finer point to members of Sustainable Bakewell*

*Photos supplied by Peak Digital Limited, Richard Body and Steve Essex*

Torrs Hydro New Mills Ltd is an Industrial and Provident Society for the Benefit of the Community

Website: [www.torrshydro.co.uk](http://www.torrshydro.co.uk)

Blog: [torrs-hydro-new-mills.blogspot.com](http://torrs-hydro-new-mills.blogspot.com)

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