

BHA Spotlight

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Hydropower - the pioneer of renewable energy



Onwards and upwards!



David Williams

On behalf of the BHA, I'd like to extend a warm welcome to our **six** new members in this issue – including a new sponsoring member! This influx clearly demonstrates both the growth in the sector and the confidence of the sector in the work we are busy doing on its behalf.

We look back at the BHA Annual Conference (more of which later) in Bristol in September with mixed views. First there was the growing interest in hydropower in all its forms and especially in micro hydro and ocean hydro. Secondly there was the very public criticism of our environment agencies in their apparent fear of hydropower development despite there being a very useful resource of renewable energy generation still available in the UK.

I am sorry that the debate sometimes reached personal levels but this is indicative of the frustration being felt by hydro developers, consultants and suppliers in their attempts to achieve national target and bring employment in an industry which, as yet, has not fallen foul of the present economic downturn. You will read in this newsletter of two regions where the BHA is working harder than ever to ensure proper policies are developed by our regulatory bodies which will guarantee new renewable projects and also have due regard for the environment.

We had a British stand and hosted a reception at "Hydro 2008" in Ljubljana in mid October (more of this later). More than ever we saw the massive potential for hydro development worldwide and the role which the UK could fill in developing our own hydropower network models and collaboration with customers and companies overseas. We intend to overcome the problems at home and lead the UK back to a prominent position abroad.

David Williams, Chief Executive, BHA

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This newsletter aims at keeping members up to date with a range of news articles including updates on BHA activities



Andrew Frazer

New BHA Chairman, Andrew Frazer, picks up the gauntlet...



“Many people enjoyed attending the BHA’s Annual Conference in Bristol in September, which catered for all forms of hydro generation both large and small. This highlighted the very positive future for hydro in the UK both in terms of resource and contribution to the Government’s renewable energy targets, and in terms of a secure enterprise in which to invest money in these stormy financial days.

All change again at BERR!

On 3rd October, the Prime Minister created the Department of Energy & Climate Change (DECC) to give an even greater focus to solving the twin challenges of climate change and security of energy supply. The new Department brings together much of the Climate Change Group, previously housed with the Department for Environment, Food and Rural Affairs (Defra), with the Energy Group from the Department for Business, Enterprise and Regulatory Reform (BERR). Ed Milliband has been appointed Secretary of

State for DECC and Mike O’Brien, a familiar face, has been appointed as the Energy Minister. Former private secretary to John Major, Moira Wallace, is the acting permanent secretary of DECC. UK Renewables is now a service of DECC. The creation of the department has been widely welcomed by renewable and sustainable energy organisations, although for hydropower there remains a division of responsibility, with water still falling within the remit of Defra.

This might indeed be a rosy picture if it weren’t for the Environment Agency’s (EA) new position on abstraction regimes and fishery protection; if these are implemented and, in due course, are back-dated to be enforced on to existing hydro schemes, there will be no new schemes built and virtually all existing schemes will be closed down.

It is the ambition of the Fisheries Section of the EA to achieve this under the guise of the Water Framework Directive (WFD); the taking up of this unilateral position is, of course, contrary to what the BHA and DECC have strived to resolve with the EA over the past 5 years through the “good practice guide for hydropower”.

As an owner and operator of two small low-head hydro schemes, I feel threatened by this attitude, which does not appear to be based on fact beyond a picture of 4 dead eels but rather on a return to the precautionary principle that no-one must do anything within a watercourse that might alter it in anyway. It must be our job within

the BHA to counter this position, not just by argument but by demonstrating that what we do is sustainable and has negligible effect on the environment.

Fishery interests like to argue that the WFD is a law to protect the environment; this view is not entirely correct as the WFD is a framework which has been adopted within the legislation by member states and dictates certain environmental aspirations that should be achieved (whether or not they are actually correct or even achievable is deemed not to be material) by a particular date; but within such a framework there is scope that sustainable activities like hydropower should be maintained.

Over the coming months, both I and the BHA executive will be putting forward our arguments at the highest level to DECC and the EA and I hope, if necessary, that we will have your support and help to overcome this challenge once and for all.”

Andrew Frazer, BHA Chairman

New Challenges, New Opportunities for UK manufacturing

The Government has unveiled a new strategy for the UK’s manufacturing sector – “New Challenges – New Opportunities” – to help UK firms take advantage of changing global trends in manufacturing. The strategy brings together almost £150m of medium term support and sets out the Government’s view of what the sector needs for success in the long term – including seizing the opportunities of the low carbon economy, supporting skills, realising overseas opportunities, and improving the perceptions and understandings of manufacturing. For more details, visit www.gov.uk.

Proposed Amendment to the Energy Bill supports Feed-In Tariffs

Ed Milliband has announced that the Government would be making changes to the Renewables Obligation and that he believes that feed-in tariffs had a role to play. More than 80 MP’s and Lords have said that they would support an amendment to the Energy Bill that would introduce a feed-in-tariff for renewable energy. This would guarantee producers of renewable energy an above-market price for any power they sell back to the grid, and would provide a significant boost to onsite generation, for both domestic and community schemes. Feed-in tariffs have proved successful at increasing renewable energy capacity in several other EU countries. A previous amendment to the Energy Bill to introduce feed-in-tariffs was narrowly defeated in the Commons.



Stepping into the Spotlight – **the BHA Annual Conference 2008** takes centre stage

Over 150 delegates attended the BHA Annual Conference 2008 in Bristol last month, confirming that the hydro industry is stepping into the spotlight to meet the growing demand for renewable energy generation over the coming years. We have long been saying that hydropower, the pioneer of all renewable energies and leading contributor to world renewable energy generation, has a major part to play in achieving the Government's 2020 targets, and this conference provided the platform to prove this. The BBC filmed part of the event and carried out interviews for both television and web-based programmes (BBC Environment Correspondent, Sarah Mukherjee, as well as Jeremy Davies for BBC Wales).



The event opened with addresses from Energy Minister, Malcolm Wicks, and Shadow Minister for Energy Charles Hendry. Both gave clear messages that hydropower was important to the UK's 2020 renewable energy generation targets, despite the majority of generation being expected to come from wind. Both ministers looked forward to the hydro resource study in England & Wales being completed and hoped that industry would contribute in the present consultations being carried out on the Renewable Energy Strategy and Banding with the

Renewables Obligation. Their messages were followed by an overview of waterpower in the 21st century and hydro in the UK energy context from Bernd Hindeland of Adritz VA Tech Hydro GmbH and Dr Tim Foster of SmartestEnergy.

The first conference session on Day 1 provided a brief review of all aspects of hydro, both in the UK and globally, prior to a more detailed discussion with key speakers from BERR, academia and industry (national and international) on the current position of hydropower within the UK energy mix, including the

Renewables Obligation, micro-hydro and barriers to development.

Day2 was very busy, with multiple parallel sessions and discussion groups covering micro-hydro (implementation, technology); ocean hydro (the Severn Estuary, tidal impoundment, hardware); project development; energy markets and financing; and the impact of EU targets of the industry.

Of particular interest in the session on implementation, chaired by BHA Council Member, Jon Needle of Derwent Hydro, were details of a unique machine built to demonstrate the basic elements of waterpower. Innovative aspects of installations in terms of overcoming both practical and economic hurdles were illustrated by Olly Paish, also of Derwent Hydro; Dr Phil Leigh of Lancaster University emphasised the complexity of the decision-making process necessary for coming up with a

design for individual sites; George Aggidis, also of Lancaster University, demonstrated the need for developers and site owners to keep up with developing technology so as to choose the best turbine for any particular job; and Keith Wheaton-Green of South Somerset District Council shared his experiences of working with the Environment Agency and achieving "hydro-friendly" agreements on abstraction licensing.

New BHA Chairman, Andrew Frazer of Harperstown Power in Northern Ireland, chaired the session on micro-hydro technology, in which Dave Mann of Mann Power Engineering showed an interesting DVD presentation on the Archimedean Screw Turbine (AST) installed at the River Dart Country Park. Following on from this, Peter Kibel of Fishtek explained the initial fishery concerns with the AST and showed how these had been rectified and resolved, confirming

Continued on page 4

The cost of CAR license applications

In a recent CAR stakeholder's forum held by SEPA, the issue of the charging for hydroelectric project licence applications was debated. It was stated by SEPA that their accounts disclose that they are over-charging operators who hold licences issued under the abstraction and impoundment regimes by 39%. This amounts to some £2.2m in 2008 alone. Not only this but it was SEPA's intention to raise the rates by 10% in 2009!

Representation is being made jointly by BHA and SRF to Scottish Ministers to seriously question this state of affairs on the following bases:

1. The causing of unnecessary double regulation of the hydroelectric marketplace by taking into account matters that have nothing to do with water quality and are already properly dealt with by the planning process.
2. Disproportionately expensive charges – in terms of current licence fees and proposed increases in these - when compared with both (a) SEPA's actual administration costs and (b) the equivalent licence fees

charged by the Environment Agency in England & Wales, where licence fees are typically less than 10% of those charged by SEPA.

3. Undermining developer and investor confidence in the hydropower market in Scotland – due to the very large direct and indirect costs that must be incurred by prospective developers in seeking a CAR licence early in the development process.

It is being stated that BHA, SRF and their members have lost confidence in SEPA's ability to regulate appropriately or fairly and for that reason we are seeking the direct intervention of the Scottish Ministers to review not CAR itself but SEPA's implementation of CAR and take whatever steps are required to remedy the position. We believe that this will benefit the economy and sustainable development of Scotland for the benefit of the people of Scotland.

David Williams, BHA

Lib-Dems launch Severn tidal power inquiry

The Liberal Democrat party has launched its own inquiry into the proposed Severn Barrage and its alternatives, hoping to have a firm policy in place next year. Steve Webb, who shadows the Secretary of State for Climate Change & Energy, Ed Miliband, in the House of Commons, has said that the UK cannot afford to delay the development of renewable power, but last month members of Plaid Cymru voted to make opposition to the barrage their official policy. With the recent increase by Ed Miliband of targets for cutting greenhouse gases by 2050 from 60% to 80%, the pressure is on.

Stepping into the Spotlight – the BHA Annual Conference 2008 takes centre stage. *Continued from page 3*

that there was no requirement screening on the tailrace. Finally, Dr Phil Maher of Pico Energy talked about improvements to waterwheels.

BHA Chief Executive, Professor David Williams, chaired the session entitled "Cashing In", which opened with a full description of the relationship between market forces and energy prices from Dr Bob Middleton of Tradelink Solutions. This was followed by Whitney Pates of Lancaster University leading an interesting discussion on the need for continued R&D in hydropower, rather than it being put on the back-burner while the industry is so busy. Steve Moore of Triodos Bank then provided a complete account of financing hydro projects from an investment bank's perspective, which was rounded off by a hilarious but

thought-provoking piece by Ian Cook on the lateral-thinkers way to reduce costs of the operation of hydro schemes.

David Williams said "I was very pleased to see the growth and maturity of the BHA conference in Bristol this year. The location, which attracted delegates interested in both onshore and offshore hydropower, was perfect and we were able to broaden our horizons in the increasingly favourable climate for hydropower development".

A member and potential hydro developer, Tim Coombe, said "I gained an enormous amount of useful information from the speakers".

"The real value for me was the opportunity to meet other BHA members, which I found particularly useful as a newcomer to the world of hydropower. All

the delegates were very helpful, knowledgeable and enthusiastic, and I hope that I too may be able to play some small part in the coming years in promoting the spread of this capability much more widely throughout the UK."

A technical exhibition took place in conjunction with the conference, with several companies exhibiting their products and services, including Dulas, Gilbert Gilkes & Gordon, Hydropol, Fishtek, Hobas Pipes, Hydroplan, SmartestEnergy, All Energy, Hydropower & Dams and Triodos Bank. The exhibition was well attended throughout both days and gave delegates the chance to meet the exhibitors and find out more about them.

Exhibitor and BHA member, Kevin Jefferson of Hobas Pipes

Ltd, praised the exhibition and said "we made contact with some potential new hydro projects in 2009 onwards".

A list of speakers and copies of their presentations are available on the BHA website (www.british-hydro.org).

The BHA would like to thank conference sponsors The Bristol Port Company, SmartestEnergy, npower renewables and Gilbert Gilkes & Gordon Ltd for their support.

For details of the BHA Annual Conference 2009 and to register your interest in sponsoring, exhibiting, providing a paper or simply attending, please contact the BHA (tel 01202 880333 or email info@british-hydro.org).

Ellan Parry, BHA

Hydropower is back in the UK

In September the First Minister for Scotland, Alex Salmond, announced "Hydro is back!" The national press ran the story on its front pages and TV also reported the good news in some detail. What was this earth-shattering news? It was simply concerning the completion of a hydropower resource study for Scotland which, in very basic terms announced that there is a minimum of 657MW of economically viable hydro remaining to be developed. So why all the excitement when we in the hydro industry have known that the UK has a great deal of untapped potential already?

Put into terms which were more readily understood by the public, the Scottish Government announced that the potential hydro resource would:

- Be sufficient to power 600,000 homes
- Be half as much power again as is already developed in Scotland
- Alone fill Scotland's renewable energy gap to meet 2020 targets

Depending on the sensitivity of individual sites to such things as discount rate, electricity price, investment recovery period and Natural Heritage land

designations, the study concluded that at least 1,000 new projects were economically and technically viable and were chiefly in the size range up to 10MW.

The study which was commissioned by the Forum for Renewable Energy Development in Scotland (FREDS) Hydro Group was completed by Nick Forrester Associates in association with Black & Veatch and SIS Tech.

As well as the optimistic quotes were words of caution from other sources: "This study reveals a new chapter waiting to unfold for hydropower in Scotland.

FORUM FOR RENEWABLE ENERGY DEVELOPMENT IN SCOTLAND

The FREDS Hydro Group is administered by the Scottish Government and has elected members including:

- British Hydropower Association
- Fisheries Committee
- Forestry Commission
- Garbhaig Hydro Power Company
- Green Power International
- Hydroplan
- Northern Energy Developments
- npower renewables
- Scottish & Southern Energy
- Scottish Environment Protection Agency
- Scottish National Heritage
- Scottish Renewables

However, there are considerable challenges being faced that rival those felt by hydro developers from the last century. Crucial to delivery of this hydro vision will be the Scottish Environment Protection Agency (SEPA), which holds the key to redesigning regulations to help deliver sustainable hydro power developments rather than blocking them."

This and other potential barriers to realising the full potential of hydropower in Scotland were discussed at a meeting organised by the British Hydropower Association (BHA) with Jim Mather MSP, Minister for Enterprise, Energy & Tourism. It

was concluded that the FREDS Hydro Group, with all relevant stakeholders in Scottish hydro development, remains the best forum for addressing constraints to the implementation of schemes. It involves the Scottish Government at the highest level and the Minister pledged that the Scottish Government's drive to create a "sustainable Scotland" would be at the top of the agenda for all departments and agencies. The stakeholder group is meeting soon and it is hoped that the development of new hydropower in Scotland will continue with a better understanding of the challenges by all parties.

RO (Scotland) - wave & tidal favourites

The Renewables Obligation (Scotland) (ROS) consultation proposes new levels of finance for different types of renewable energy development in Scotland. Proposed changes now mean wave devices which haven't received Government funding will attract five Renewable Obligation Certificates (ROCs), for every MW of power produced, with tidal devices attracting three ROCs. Established technologies like onshore wind and hydro would continue to receive one ROC for every Megawatt. The move compares favourably with England and Wales where wave and tidal would receive two ROCs per Megawatt, meaning Scottish wave and tidal devices operators would receive more revenue for the electricity they generate, stimulating further investment in Scottish marine renewables.

The powers to deliver a banded Obligation depend on a changes being made to the primary legislation through the draft UK Energy Bill;

should that Bill receive Royal Assent, then powers will be transferred to Scottish Ministers using an Order under the Scotland Act. A preliminary Scottish Government consultation earlier this year established support with the principle of banding, and Ministers' intentions for its introduction across all UK Obligations. The banded ROS would replace the existing Marine Supply Obligation (MSO), meaning higher multiples will be available on the same basis as the MSO.

The new proposals for wave and tidal support mean generators must not have received support under existing capital and revenue support schemes for wave and tidal stream energy operated by either the Scottish Government or the UK Government. Where support has been received, generators will be eligible for two ROCs.

Adrian Abbott, BHA

Scottish Government Renewable Energy Framework

The Scottish Government has issued a consultation on a framework for the development and deployment of renewable energy in Scotland, complementing proposals in the Renewables Energy Strategy issued in June by the Department for Business, Enterprise and Regulatory Reform (BERR).

The proposed Scottish framework, drawn up in cooperation with the Forum for Renewable Energy Development in Scotland (FREDS), should contribute to the Scottish element of the UK National Action Plan for renewable energy in relation to the proposed EU directive on renewable energy. The Scottish Government intends to prepare and publish a final framework by early 2009 working towards an emissions reduction target of 80% by 2050; and a target of electricity consumption from renewable generation in Scotland of 31% by 2011 and 50% by 2020. The consultation document seeks views on the Scottish Government's proposed 20% target setting out what is being done and what more needs to be done to achieve this target.

The BHA will prepare a response so please contact Adrian Abbott with your views by 21st November (email Adrian.abbott@british-hydro.org or tel: 020 7223 6247).

Adrian Abbott, BHA

Rates Review

The review of Non-Domestic Rating Valuations is now under way. The Association of Electricity Producers (AEP) has formed a working group to direct their work on the review and it has agreed to use the services of the specialist advisers Keith Norman of Gerald Eve and Adam Davis of Dalton Warner Davis to assist with the response on generic issues associated with the revaluation. With an anticipated total bill of £50,000 - a significant financial outlay for AEP members - it has been decided that AEP members that are interested in this issue should undertake to fund between them the advisers' work and that participation in the AEP Working Group should be dependent on a clear commitment to paying a share of the funding. BHA will receive papers and reports on progress made by the working group and will be able to contribute during the group's deliberations.

Adrian Abbott, BHA

WFD - new classification system

In the continuing implementation of the Water Framework Directive (WFD), draft River Basin Management Plans (RBMPs) will be available for public consultation at the end of 2008. The WFD will introduce a new classification system as a way of assessing the water environment more widely. WFD monitoring is risk-based and focused where there is likely to be a problem. It has a far wider range of assessments than the General Quality Assessment (GQA) used for the last 20 years as a measure of water quality, which WFD will replace. The WFD classification adds another level of environmental quality; ecological health. Look out for the consultation on the RBMPs covering England & Wales, which are expected to be published in December.

Growing Success for Mann Power



Dave Mann, MD of Mann Power Consulting Ltd

Since introducing the Archimedean Screw hydro-generator into the UK in 2005, it has been an exciting few years for BHA member, Mann Power Consulting Ltd. Their extensive live fish trials and monitoring of existing sites have proved the excellent environmental and economic credentials of this technology to customers and regulatory bodies alike. They currently have 8 sites installed throughout the UK and Ireland, with another 50 at various stages of development.

As the Company grows, they are constantly looking for news ways to improve their products and services, and are delighted to announce that from 1st January 2009 they will be joining forces with Rehart GmbH, leaders in the field of mechanical engineering in

Germany with a 25-year history of excellence. This partnership will enable them to offer a cost effective compact design, reducing overall project costs; a unique bearing design, which overcomes the reliability issues currently experienced by other manufacturers; larger capacity equipment (up to 10m³/s), broadening the scope of sites that can be developed; and fully integrated 3-D design and build capacity.

With electricity sales prices having doubles in the last year, an Archimedean Screw hydropower system has never made more sense. **For more details, including case studies, visit www.mannpower-hydro.co.uk.**

Dave Mann, Mann Power Consulting Ltd



British Waterways plans renewable developments

On 8th October it was reported that British Waterways had announced plans to erect wind turbines at canal and riverside locations and develop hydropower projects over the next five years. Only environmentally appropriate sites would be developed and the money from the sale of the electricity produced would be ploughed back into maintaining historic waterways. British Waterways believes that their waterside land could host around 100MW of renewable energy capacity - some 219,000MWh. British waterways will work with Partnerships for Renewables and HSBC's Environmental Infrastructure Fund to develop renewable projects. If fulfilled, British Waterways would generate more than 10 times more electricity than it consumes.

The BHA micro-hydro seminars travel to Yorkshire and Derbyshire



Tanfield Mill

Over 130 delegates attended the Yorkshire and Derbyshire micro-hydro seminars, travelling from as far afield as Northern Ireland.

Bedale Golf Club was the venue for Yorkshire, with a variety of speakers covering subjects such as EA licensing requirements, finance, case studies and equipment, along with an inspirational talk from Ann Harding, a Director of Settle Hydro community scheme (see separate article). There followed a site visit of Tanfield Mill (36kW), owned by BHA member Stephen Young.

The following day saw the seminar move to Masson Mills in Matlock, Derbyshire where as well as subject covered the previous day, Dr Andy Tickle of Friends of the Peak District gave an interesting talk about a survey template for micro-hydro, produced by Dartmoor National Park, which is being used in the Peak District to identify potential in the region. The site tour took in the 150kW installation at Masson Mills.

WFD Stakeholders' Group

The WFD Stakeholders' Group (WFD-SG) last met on 10th October. The meeting reviewed progress over the previous six months, reporting that the RBMPs were in preparation for publication in December but it was unclear where water quality fitted in to the new ministerial arrangements (see above). Defra will be selecting consultants to look into involving voluntary organisations in the implementation of catchment restoration plans - this could have a major impact for hydropower development and the BHA has specifically requested involvement in the process leading to the development of these plans. Defra will issue a consultation on water protection zones (WPZs) on or before 22nd December, which will include a draft Statutory Instrument under the Water Resources Act and statutory guidance. It will include a scheme for the process of designating WPZs, a large chunk of which will relate to hydro-morphology (to designate damage as pollution). The aim would be to legislate in the spring of 2009 with it coming into force in October 2009. Stakeholders were concerned that WPZ powers demonstrate a slide towards micro-management of activities.

Regular reports and updates on England & Wales and the WFD are posted on: http://www.euwfd.com/html/england_and_the_wfd.html

Adrian Abbott, BHA



The weir at Masson Mills

The BHA is grateful to all the speakers who make these events so successful. We would especially like to thank Dr John Aldrick, Head Office Water Resources Regulation Manager, for the EA who professionally and honestly answered some understandably tough and tricky questions from the delegates.

We look forward to continuing our programme of these highly successful events in 2009.



Installing the new turbine at Dolanog

Dolanog Hydro Station gets a new lease of life

BHA member, Derwent Hydro, took control of the Dolanog hydro station in April 2007. There has been hydroelectric generation at this site for many decades, with it once being the only source of electricity in the village. The head is a little over 7m and the mean flow is around 2400 l/s. A major upgrade was undertaken in the first half of the 1990s under the NFFO. However, the unfortunate situation by 2007 was that the scheme had not run effectively for many years. Two of the four turbines installed in the 90s were in working order but annual output of this 178kW (NFFO) rated site had not been over 195MWh for at least 5 years. The existing machines were fixed flow propeller turbines designed to draw 600 l/s and 1000 l/s. A thorough re-evaluation of the site conditions was carried out and it was established that the flow available for hydropower was less than 600 l/s for over half of the year due to the regime of releases from the reservoir upstream. Other important problems with the existing state of the system were general reliability and the control system's ability to respond to changes in the available flow. In response to these issues, Derwent Hydro installed a new crossflow turbine that will operate efficiently across a wide range of flows and a new control system (designed and built in-house). These allow the station to track the river level and respond to it precisely, achieving a much improved load factor. The addition of the new turbine also restores the capacity of the site allowing the scheme to take advantage of very wet weather. Other smaller issues which previously reduced reliability have also been addressed. An overhaul of the larger propeller system was only completed in September '08 and the crossflow was brought online in June '08. In spite of this the scheme had already generated over 197MWh in January-August this year and they hope to generate 500MWh in 2009. Here's to a wet and productive future at Dolanog!

Derwent Hydro

Upwey Mill gets connected

Upwey Mill on the River Wey has been grinding corn using a waterwheel for centuries. But now it is about to get connected to the national grid. Owners Richard and Susan Willett, had to dig down the equivalent of a two-storey house to install a water turbine and restore sluice gates behind it. The mill at Upwey is one of several in Dorset already producing power. Lyme Regis Town Mill was switched on last year and the mill at Stour Provost in North Dorset is using its historic waterwheel to generate electricity. Other conversions are in progress at mills on the Rivers Brit and Bride, Frome and Stour.

Source: BBC Dorset

Go Ahead for Kelney Burn hydro

The Keltny Burn run-of-river hydro scheme near Aberfeldy, which will have a capacity of 2MW, has been approved by Ministers. Any proposal to build and operate generating stations wholly or mainly driven by water in excess of 1MW requires the consent of Scottish Ministers under Section 36 of the Electricity Act 1989. In November 2004, Keltneburn Hydro Ltd applied for consent to construct and operate a run-of-river hydro electric station with a generating capacity of 2MW on the Keltney Burn in Perthshire. Following consultation, an addendum to the application was submitted in April 2007. Perth and Kinross Council has supported this application subject to a noise condition being imposed.

Source: Dods Parliamentary Communications Ltd

Hydro scheme plans lodged

Plans for a hydro-electric scheme on a Morvern estate have been lodged with Highland Council. BHA member, Hydroplan, intends to construct a 750kW scheme on Rannoch River within Ardtornish Estate, comprising a powerhouse and a pipeline linking the river with Loch Tearnait. The construction programme is expected to last between 12 and 18 months, during which time Hydroplan's director Kieron Hanson said accommodation outlets and other businesses in Strontian and Fort Williams would benefit from construction staff and visitors to the site. "The main works would be the dam construction and laying of the pipeline" said Mr Hanson. Hydroplan has also submitted plans for two hydroelectric schemes on Conaglen Estate at Duisy and Garvan.

Kieron Hanson, Hydroplan

Hydro in Huddersfield

Homes in Huddersfield could soon be lit by hydropower if plans to build a micro-hydro scheme on the River Colne at Aspley are given the go-ahead. The scheme, which would provide power for up to 60 homes, will be community-owned and managed, with surplus profits being returned to the community.

Source: www.examiner.co.uk

New Abstraction License Applications for Hydropower

- **22 October: Riverpower Ltd;** full license to abstract water from De Lank River
- **23 October: The Lee Abbey Fellowship;** full license to abstract water from the tributary of the River Lee

Details of new license application are available on the EA website for a period of 28 days (www.environment-agency.gov.uk).

Gardner Denver completes CompAir acquisition

On 20th October 2008 Gardner Denver Inc announced that it had completed its acquisition of CompAir Holdings Ltd, a leading global manufacturer of compressed air and gas solutions. CompAir, based in Redditch, operates through three business divisions; Industrial, Hydrovane and Reavell. The Reavell Division is a leading manufacturer of high pressure reciprocating compressors. The acquisition will considerably strengthen Gardner Denver's high pressure compressor business based in the UK.

Gardner Denver

Scottish & Southern caught cutting capacity

Scottish & Southern Energy (SSE), one of Britain's largest power companies, has been accused of deliberately cutting the amount of electricity generated by some of its plants in order to qualify for Renewable Obligation Certificates (ROCs), collecting over £100 million worth in subsidies meant for smaller energy projects since the RO started in 2002. Robin Pagnamenta, Energy & Environment Editor of The Times, claims that SSE also installed new, smaller turbines that were designed to generate less electricity in some schemes in order to keep the installed capacity below 20MW so that they would qualify for funding. A spokesperson for SSE has said that the utility company had invested more than £300m in extending the life of hydropower schemes in Scotland and improving their efficiency.

Source: www.timesonline.co.uk

Glendoe health & safety set-backs

Things haven't been going so well for Scotland's largest hydro scheme. The contractor, Hochteif Glendoe, was ordered to stop using all of its vehicles after a construction worker broke his leg when a road roller he was in tipped over and he fell down the side of the dam. It transpires that the roller had a defective seatbelt and the worker was not authorised to drive the vehicle. This comes just three weeks after another construction worker from Prague was killed in an accident involving a forklift truck at the site, which is run by Scottish & Southern Energy.

Source: www.timesonline.co.uk

Key Award presented to All-Energy

The UK's largest renewable energy exhibition and conference, All-Energy, has been presented with the Renewable Energy Award in the Northern Start Awards, run annually by Aberdeen & Grampian Chamber for Commerce. The award is made to the company that 'has been most successful in developing and securing new business by market penetration or order value'. All-Energy was launched in 2001 and has seen consistent growth over the years in terms of attendance figures, exhibitors and number of speakers. The 2008 show attracted 4,700 from 61 countries, over 380 exhibiting companies from a dozen countries and some 200 speakers from home and overseas. The BHA will be supporting All-Energy 2009, which last year saw a significant increase in the hydro delegation. We will be organising the hydro session that will form part of the conference programme and exhibiting – if you are interested in participating in the BHA stand, which will allow companies to have a presence at a much reduced cost, please contact the BHA.

Ashden Awards 2009

Do you want to put your local sustainable energy solution in the global spotlight to inspire others? If you're finding new ways to produce or roll out renewable energy, supporting microgeneration, tackling fuel poverty, spreading energy efficiency or promoting sustainable energy at the local level, you may qualify for a UK Ashden Award with a chance of winning up to £30,000. Each year the Ashden Awards looks for ground-breaking initiatives that can share their hard-won success and get wider recognition for it. Applications must be based on a scheme that has been running for at least a year, that is technically excellent and that is improving the lives of local people. Previous winners include Nile & Gail Fursdon of Old Mill Hydro in Devon. The 2009 UK Awards are open to businesses, local authorities and charities based anywhere in the UK (there is a separate award for UK schools). For more details, visit www.ashdenawards.org/uk_awards.

Energy Report: October 2008



Bob Middleton

The energy crisis is now over. However prices remain high and the opportunity for suppliers to withdraw production to maintain high prices still exists, just about. The oil market came into balance across the summer following a period of shortage and record prices, which, along with the economic slowdown, have resulted in a demand reduction of 2m barrels a day and increased supplies. As a surplus has built up prices have begun to fall precipitously. The recent OPEC meeting reduced output by 1.5 million barrels a day but this oil was not being sold anyway and to increase prices cuts of nearer 3 million barrels per day would have been needed. Unless Russia cuts production, which still may happen.

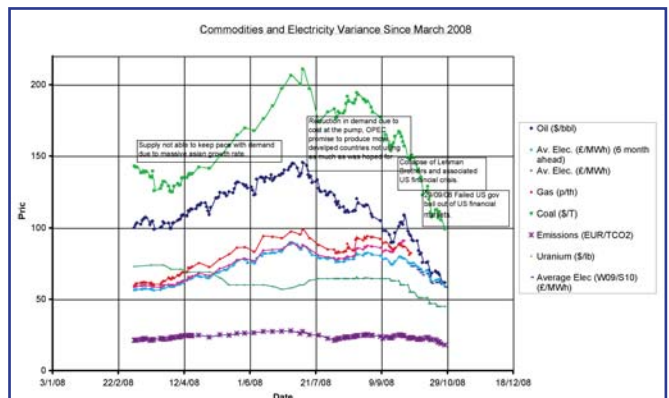
The gas price futures have followed suit as would be expected as European gas prices are contractually linked to oil product prices. The contracts operate with a six to nine month lag so European delivery prices remain high and will continue to do so for a few months yet. The shorter term gas price however is set by the price of gas released from storage in the winter period and weather patterns. This gas has been purchased at very high prices during the summer months and when added to the cost of storage has cost the utilities a great deal of money. Obviously any falls in the near term will be extremely costly to these companies and it is not surprising prices have remained high and a little sticky for mid winter. The price outlook is likely to ebb and flow with the weather but significant price falls during warm periods are likely.

As gas remains the marginal fuel in the UK generation mix the price of gas remains critical to the level of electricity prices. The spark spreads however have also widened due to the underperformance of the UK's nuclear stock and some concerns to the extent these major system stations will be available this winter. Given there is a risk of a significant fall in gas prices and a possibility of improved plant availability this winter compared to market expectations the winter prices in the market look extremely vulnerable.

Prices for the next few years are holding around £58/Mwh but may weaken over the next few months if the recession materialises as many expect. The other aspects of renewable energy prices are relatively steady. The ROC prices look like a re-run of last year around £50/Mwh and LEC prices remain just above £4/Mwh.

For Hydro investors these prices should continue to offer adequate returns provided the increased investment costs seen recently abate in line with the commodity and especially the copper market. New developers will need to put pressure on manufacturers to retain their profitability in a period of price weakness.

Bob is MD of Tradelink Solutions Ltd and would welcome your call to discuss the market.



INTERNATIONAL NEWS

HYDRO 2008 puts Slovenia firmly on the map

It was another busy event for the international hydropower industry this year at HYDRO 2008 in Ljubljana, Slovenia, with over 800 quality delegates from over 60 countries across the globe. Conference sessions, one of which was co-chaired by BHA Chief Executive, David Williams, were packed with interesting content covering a wide variety of topics.

Mike & Denise Banks of S M Seals Ltd joined the UK Pavilion, which was organised by the BHA and supported by UK Trade & Investment (UKTI). Here, they were able to show off their products and services to key decision-makers and industry players, discuss business opportunities on a one-to-one basis and network with fellow hydropower professionals, customers, contacts and friends, both old and new.

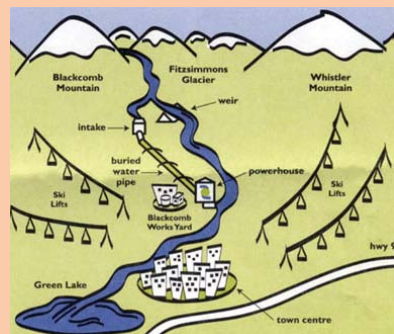
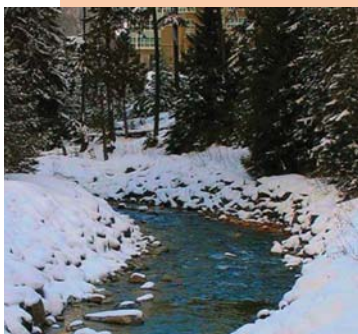
A separate BHA-led UK Networking Reception, also supported by UKTI, was held on the evening before the official conference start. The local Trade Adviser from the British Embassy, Nina Luznar, opened the reception with a short welcome note to the 250+ conference delegates who came to meet representatives from UK the companies with a presence at the event.

Our thanks go to Aqua-Media and Network Events for their invaluable support and assistance at this event.

For details of proposed BHA-led activities at HYDRO 2009 on 26-28 October 2009 in Lyon, France, including how to participate, please contact Ellan Parry at the BHA - tel: 01202 880333 or email info@british-hydro.org.

Ellan Parry, BHA

2010 Winter Olympics to be powered by hydro



Whistler-Blackcomb, owner of the official skiing venue for the 2010 Olympic and Paralympic Winter Games, is building a huge hydro project that will power the entire resort with renewable energy.

When the 7.5MW site in Fitzsimmons Creek is completed in 2010 it will produce 33.5GWhrs of electricity, enough to power the entire Canadian ski resort's 38

lifts, 17 restaurants and more. Snowboarders looking for the ultimate green ride will be pleased to hear that the creek does not have fish and isn't used for recreation either. Electricity lines from the hydro turbine will be buried underground and the energy will be sold to local utility BC Hydro.

Source: Smart Planet 26/09/08

Letter from Mike Banks, MD of S M Seals Ltd

Dear Ellan,

Many thanks for arranging once again a very successful stand at Hydro 2008. Whilst we found the show excellent we were a little disappointed that more UK companies decided not to take up what is without a doubt the most cost effective opportunity of promoting their companies and products and or services. We were one of eight companies at Hydro 2007 in Granada but we were the only one in Ljubljana. What happened to the other seven? We need to show our support by attending these types of events or the BHA will lose the support of UKTI, BERR etc and the money we currently receive will be allocated to alternative organisations; once lost it will be almost impossible to get it back.

I firmly believe that not attending these events is very short-sighted; given the gestation period that hydro projects can take you may well be busy now but nobody knows what is going to happen next week or month or even two years down the road. One thing however is absolutely certain, if you haven't marketed your company and yourself at events like this then it is likely that many potential customers, who regularly attend these events, will have forgotten you even existed. Remember - buyers' memories are very short.

I am completely mystified as to why UK companies seem reluctant to attend these shows. Not only was it very well attended but the drinks reception, organised yet again by BHA, on the Sunday evening was also a great success. We were not only able to meet in a relaxed and friendly atmosphere over drinks old friends and acquaintances, but also a much wider variety of contacts - who may not be of use immediately but who knows how useful they may be in the future? Once the conference starts many of the delegates are tied up attending seminars or presenting papers and don't always have the time to meet all the exhibitors so the drinks reception could be the only chance you have of meeting some very useful contacts.

We went to the show with two main objectives and I'm pleased to be able to report that not only did we achieve these objectives but we actually secured an invitation to visit another company with whom we had previously not been able, thereby adding to the success we had already experienced. Overall, Hydro 2008 was a fantastic event and we will definitely be going to Hydro 2009 in Lyon, and lets hope more British companies fly the flag.

Kind Regards

Mike Banks Managing Director, S M Seals Ltd

INTERNATIONAL NEWS



Invitation to join an Energy Mission to New Zealand

A mission covering hydro, tidal and wind energy, carbon sequestration, and energy efficiency for commercial and domestic use, is scheduled for the week of 2-6 February.

The High Commission and its colleagues in UK Trade & Investment (UKTI) will be aiming to host several UK research and commercial organisations to meet with New Zealand counterparts and is planning a "UK-NZ" workshop in Wellington, accompanied by participant visits to sites of interest. Some government funding in the range of £1k - £2k is available to assist UK research and early stage participants that do not have access to sufficient funds of their own, provided that their interest is to explore collaborative agreements with a commercial outcome. Participants may also make their own presentations at the Wellington workshop. The High Commission will also facilitate individual discussions with New Zealand organisations, with a view to moving towards agreements involving one or more of:

- collaborative research, covering IP discovery and use and providing templates for business collaboration (even if the research is in the pre-competitive stage);
- inward or outward investments;
- sales or purchases of IP or products

Participants may also wish to visit other organisations in New Zealand before or after the meetings, and the High Commission/UKTI will be pleased to assist in making the necessary contacts and arrangements. UK Commercial and research organisations interested in joining the mission should contact Philip@Wolfeware.co.uk specifying their sectors of interest. Applicants needing assistance with their costs should specify the amount sought.

World Bank funding for renewables rises in 2007/8

Hydro was a key recipient of the jump in funding from the World Bank Group for renewables and energy efficiency schemes in developing countries in the year to 30 June. In total the funding increased by 87% from the previous year.

Source: www.waterpower.agazine.com

Record-breaking cable laid

The world's longest underwater cable, linking Norway and the Netherlands, has been officially inaugurated, Swiss technology concern ABB announced last month. The 580km long NordNed link, which has a transmission capacity of 700MW, will supply the Dutch grid with power from Norwegian hydro stations to make up shortfall during peak periods.

Source: www.swissinfo.ch

The Danube to boost Romania's RE target

The Romanian government is considering the construction of a giant hydro station on the Bulgarian border. Romanian officials have commissioned a feasibility study of the scheme, which would be sited on the Danube river near Turnu Magurele, Teleorman county, and Prime Minister, Calin-Popescu Tariceanu has told the Romanian media that he has already secured agreement for the project from his Bulgarian counterpart, which would help boost Romania's percentage of green energy from its present 17.8% to the EU target of 24% by 2020.

Source: www.building.co.uk

Forthcoming **BHA** **EVENTS** 2009

CURRENT CONSULTATIONS

Two important consultations are being addressed at the moment:

- **Scottish Government Renewable Energy Framework**
Members responses due by 21st November 2008.
- **Draft River Basin Management Plans (RBMPs) for England & Wales**
closing anticipated publication in December 2008

The BHA responds to consultations on behalf of its members, based on a consensus of responses received for members. Summaries of consultations are emailed to BHA members advising of a deadline for receipt of responses. We also advise individual members to respond directly to consultations.



NEW MEMBERS

The BHA would like to welcome the following new members:

- **Ross McDowall** (Private member); Ross is an aspiring developer/owner/generator based in Lancashire.
- **University of Southampton School of Civil Engineering & Environment** (Academic member)
- **Highland Eco-Design** (Correspondent member); Consultants specialising in the design and installation of micro-hydro systems.
- **J N Bentley Ltd** (Company member); a privately owned construction services provider. They were involved with the Esholt



A full list of forthcoming BHA events is currently being prepared.

For more details please contact the BHA.

Other **EVENTS** for your **DIARIES**

SOUTH WEST GREEN ENERGY AWARDS

25th November 2008 – Bristol

www.regensw.co.uk

SCOTTISH GREEN ENERGY AWARDS

4th December 2008 – Edinburgh

www.scottishrenewables.com

waste water treatment plant, which included the installation of a screw turbine, and plan to increase their activities in the hydro sector.

- **Severn Trent Water** (Company member); This utility company currently produces 3% of their self-generated electricity from water by harnessing reservoirs, gravitational water distribution networks and sewage treatment works outfall.
- **Running River plc** (Sponsoring member); a company floated on the London Stock Exchange established for the purpose of making investments in the renewable energy sector, with a particular emphasis on run-of-river hydro-electric projects.

For the perfect energy mix just add **water!**

BHA Secretariat:

David Williams, CEO
Ellan Parry (Editor), Operations & Marketing Manager
Adrian Abbott, Policy & Consultations Manager
Nicki Salmond, Operations Assistant
Chairman: Andrew Frazer
Vice-Chair: Chris Brett



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