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Comment from the Chief Executive



David Williams

Summer is over and the wet weather has done hydropower no harm at all!

The BHA battles on to address the barriers to onshore and offshore development and to try and help our industry to grasp the opportunities here and worldwide.

The number of consultations pertinent to the hydro sector seems to increase exponentially and some of the proposed changes cut right across the policies which have been introduced to promote renewable energy development. Specialist BHA teams are working hard to apply pressure and improve the situation in important areas such as:

- Business rates – set to potentially treble from 2010
- Grid connection – are government proposals apt and timely?
- Feed-in-Tariffs – is hydro getting a fair deal?
- Fish passage legislation – can the country afford the proposed measures?
- Time-limited abstraction licences – will the limits drag hydro development down?
- Microgeneration certification – can plans for other renewables be applied to hydro?

Our conference in Liverpool on the 14th and 15th October will cover these and other aspects of our diverse industry. It will also be a perfect opportunity to renew acquaintances and gain new contacts. We are especially pleased this year to have as conference sponsors RWE npower, the Northwest Development Agency and Gilbert Gilkes & Gordon. A tidal energy session organised by the Northwest Tidal Energy Group is an exciting addition to our programme and we look forward to getting up-to-date with tidal developments, including a review of La Rance. Together with sessions covering all types of hydro and a view of the future, we look forward to an exciting and enjoyable two days.

I look forward to seeing you in Liverpool – don't forget to register!

David Williams, BHA CEO

The British Hydropower Association is sponsored by:



British Hydropower Association www.british-hydro.org



Launch of the Good Practice Guidelines for the environmental assessment of proposed low-head hydropower projects.

To coincide with the opening of the Osbaston hydro project in Monmouthshire, the Environment Agency (EA) has announced the launch of the Low Head Hydro Good Practice Guidelines on which the BHA has been collaborating since 2005. It has been a long and tortuous path and, even now, sections of the Guidance are subject to review and alteration.

The main continuing contentious area is the section on screening where the EA's reasons for the inclusion of strict precautionary limits are not been backed-up with evidence-based or any other research. We are pleased that the EA will now continue, in collaboration with the BHA, to gather the evidence and we will be part of continual reviews based on the forthcoming evidence.

During preparation of the Guides, the successful appeal against the proposed abstraction limitations at Tipton Rolling Mill in Devon proved the importance for clear evidence and risk-based evidence. The Inspector found that the reasons for the development of renewable energy outweighed the lack of reasons for flow restriction to the turbine.

In our drive to develop hydro schemes we must also develop our relationships with the three environment agencies within the UK to ensure that we are treated equably. The BHA will continue to do this on behalf of the UK hydropower sector and members will continue to get the direct benefits of our deliberations

I would like to thank all members who have been involved with the development of the Good

Practice Guidelines for their invaluable expertise and tolerance.

The EA issued a press release on the Good Practice Guides launch which includes a comment from the BHA. Following is the full text which was supplied to the EA:

"The British Hydropower Association welcomes the launch of the Good Practice Guidelines introduced for clarity of purpose, consistency in approach and to speed up the licensing process for low head hydropower projects.

Development of the Guides has been a unique collaborative effort bringing the hydropower sector into close contact with the Environment Agency (EA) at policy level and has led to closer understanding on both sides. The process has not been without its problems and has taken much longer than anticipated and in the end there have had to be compromises.

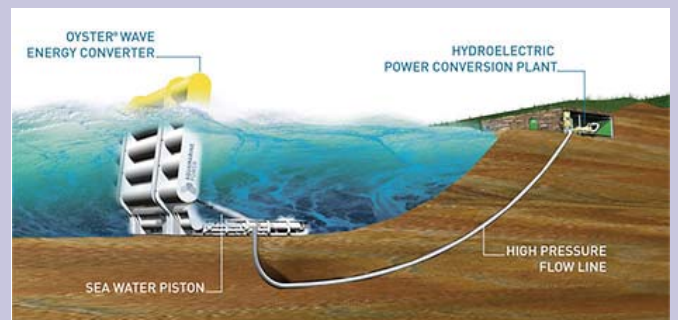
The Guidance is still "Work in Progress" since there are areas of conflict requiring further evidence-based research to overcome anecdotal evidence and personal views. The proposed regular review process will enable rapid dissemination of research results and effect necessary changes which will become apparent as the Guides are used.

We appreciate the support given by the Department of Energy & Climate Change which values the

role of hydropower in the drive to meet renewable energy targets in the UK and has to implement the EU Directive on the Promotion of the use of Renewable Energy Sources. Equally, the EA is working towards implementation of the EU Water Framework Directive. It is the balance between

preservation of the environment and the need for more renewable energy from both directives which has to be accomplished. We are all part of this process and the new Guidelines should help in this by promoting greater efficiencies in the licensing process".

David Williams, BHA CEO



The Oyster

Progress for the Oyster

A milestone in implementation of Aquamarine Power's Oyster has been achieved with the wave energy converter, which uses a hydro turbine, being placed on the seabed at the European Marine Energy Centre (EMEC) testing centre in Orkney.

The 194 tonne Oyster converter was lowered onto a seabed subframe and bolted into position. The system transfers nearshore wave energy from water depths of 10-12m to onshore hydropower turbine via high pressure water in subsea pipelines. The pressure waves are generated in the pipeline by movement of a flap in the sea, driving the oscillating surge converter which is fitted with double-acting water pistons. Following the successful placement of the device, the next stage is to connect the pipelines are planned for later this year.

Aquamarine Power has a deal with Airtricity to develop up to 1GW of capacity by 2020 using the Oyster at a number of locations.

Source: Aquamarine Power

Government proposes new grid connection rules

New rules to revamp the way power plants connect to the British power grid were proposed last month by energy and climate secretary Ed Miliband. Mr Miliband, who announced the Low Carbon Transition Plan in July, said the rules would help new renewable energy projects, waiting to get a date to feed electricity into the grid. There is currently over 60GW (200 projects) of new generation capacity waiting to be connected to the grid, 17GW of which is from renewable sources.

Some of these cannot connect before 2023 under the current

rules, which are based on an "invest then connect" basis under which they must wait for all infrastructure investments to be completed, resulting in some schemes being given connection dates years after they are due to start producing electricity.

The new consultation proposes three options for how the new system could work:

- Connect and manage (socialised): additional operating costs arising from increased transmission constraints will be shared between all network users;
- Connect and manage (hybrid): targeting some of the additional

constraint costs on new entrant power plants;

- Connect and manage (shared cost and commitment): offering the choice to new and existing power stations to commit to the network in return for greater certainty over charges, or to opt out and be exposed to the additional constraint costs.

The consultation close on the 24th October with the new rules likely to apply from 2010. Ofgem has already approved interim arrangements to help new power stations connect more quickly but the Government is now intervening to ensure enduring access arrangements are put in place.

Source: SmartestEnergy



Wave Hub gets the green light in UK's first Low Carbon Economic Area

The Wave Hub project in England has been approved by the South West Regional Development Agency (RDA), which said the marine energy potential of the area has led to its designation as the UK's first Low Carbon Economic Area.

The UK Government is contributing £9.5m to the Wave Hub project, with £12.5m coming from South West RDA and a

further £20m from the European Regional Development Fund (ERDF). Wave Hub will have 20MW capacity and be scalable to 50MW.

The Government will give a further £10m to back other marine energy projects in the region. South West RDA is leading a £100m, two-year investment programme in marine energy.

Source: waterpowermagazine.com

Renewable take a bigger slice of the cake

The proportion of electricity generated in the UK from renewable sources rose to 5.5% in 2008, according to figure released by the Department of Energy & Climate Change (DECC). This increase from 4.7% in 2007 was attributed to growth in both the wind and biomass sectors as well as a recovery in hydro levels.

Government reveals details of proposed feed-in-tariffs

The Department of Energy & Climate Change (DECC) has announced its proposed design for the introduction of feed-in-tariffs for small power generators from April 2010. The details were published in its Consultation on Renewable Electricity Financial Incentives on 15th July. The department said it hoped the tariffs would encourage smaller low carbon generation at household and community level.

The consultation closes on 15th October.

NWDA investigates tidal barrage in Solway Firth

The Northwest Regional Development Agency (NWDA) has agreed to commission a £100,000 feasibility study looking into tidal energy options on the Solway Firth.



The Solway Firth

Located on the border between Scotland and England, the Firth is estimated to hold up to 180MW of tidal power and the NWDA is actively promoting the possibility of building a tidal barrage between Bowness in Cumbria and Anna in Dumfries. It is also investigating a number of other options, including tidal reefs.

Due to be completed in November, the study will also provide the NWDA with an accurate idea of how much of the estimated 180MW can be harvested with each scheme.

Source: newenergyfocus.com

Pensioner wins fight to light road from hydro scheme

Environment officials have backed down and allowed a pensioner to carry on generating electricity using water turbines he built over 30 years ago.

Tudor Roberts (82) from Blaenau Ffestiniog placed turbines in the River Bowydd in 1975 and has used them to generate electricity for his Isla Bryn property and ever since. The 2.5kW produced also lights up five street lamps for neighbouring properties in Brynbowydd – a private road – and land owned by Mr Roberts and his wife.

But environment officials recently found out about the scheme and told him he'd have to remove the turbines. However, Mr Roberts received support from villagers, his local MP and councillors.

Following an investigation the Environment Agency has decided the filter, pipes, generator and cables he uses are of no detriment to the area.

Source: dailypost.co.uk

SSE shuts down Glendoe after rockfall



Glendoe

A tunnel rockfall has shut down the Glendoe hydro plant – the largest conventional hydropower plant built in half a century - only eight

months after generation began. The structural failure happened near the top of the headrace, where it is fed from the reservoir.

Progress for European Hydropower Database



With backing from the EU, the European Small Hydropower Association (ESHA), in conjunction with a consortium of national organisations including the BHA, is to develop a database of European hydropower as well as recommendations on future hydro development.

The Streammap project is to run three years from its launch in June. The programme is partially funded by the EU under the Intelligent Energy Europe Program conducted by the European Agency for Competitiveness and innovation. The central database,

called HYDI, will include complete information on the hydropower sector for each of the 27 EU member states. Information will range from basic data on the number of plants to investment and economic variables. It will also cover policy and legislative frameworks.

The second purpose of the programme is to define a “road map” for the small hydropower sector, including recommendations on future development to be delivered to national and local policymakers in view of plans to increase use of renewable energy.

ENERGY NOW EXPO

Renewable Energy Events Ltd, organisers of Energy Now Expo 2010, are delighted to announce further industry support from leading bodies in addition to the British Hydropower Association.



The Country Land Association, Royal Society of England, Three Counties Agricultural Society, Solar & Ground Source Heat Pump Associations have all pledged support and will encourage their members to attend the inaugural event scheduled to take place at

the Three Counties Showground in Malvern, Worcestershire on 17th & 18th February 2010.

Energy Now Expo will feature 60+ exhibitors offering a wealth of information on renewable energy solutions for farmers & land owners including hydro.

'There has been tremendous exhibitor interest from across the renewable energy sector, with a number of trade stands already being confirmed including Landia (UK) Ltd, Xergi Ltd, SmartestEnergy, RES Group and WELtec BioPower GMBH' said Energy Now Publisher David Jacobmeyer.

The event will also incorporate a conference and workshops, including BHA-led hydro workshop, which will help visitors understand the alternative energy technologies available and potential investment opportunities for their land and business. 'The conference & workshop schedule is now in place with many speakers and representatives already confirmed' said Paul Davis of Energy Now Expo.

The Energy Now Expo will be held at the Three Counties Showground in Malvern, Worcestershire on 17th & 18th February 2010. For a full schedule of events and to book your delegate place please visit www.energynowexpo.co.uk.

Cruise ships plug into hydropower

Cruise ships docking at the Port of Vancouver, British Columbia, Canada, are turning off their diesel-powered engines and tapping into hydropower generated by utility British Columbia Hydro.

Princess Cruises has spent \$7m to equip its ships with new technology allowing them to plug into an onshore transformer at the Canadian port. It is a first for Canada and only the third of its kind in the world.. The clean power will be used to carry out the ship's services and will reduce emissions from the diesel engines. The onshore innovation is essentially a large plug and socket that channels power from a landside transformer to the ship via a three-and-a-half inch cable.

Source: hydroworld.com



World Bank open to critics again

A recent paper by World Bank staff, which argues for enhanced support of large hydropower projects, has reignited controversy over the Banks' approach, with NGOs claiming that project planning and implementation still show disregard for social and environmental considerations.

The Bank committed to re-engage in large water infrastructure projects in 2003. Since then, lending to large projects supplying over 10MW increased from \$23m to over \$1bn in 2008. Additional projects worth \$2bn are in preparation. In "Directions in Hydropower: Scaling up for development", Bank staff write that the Bank will further increase its lending with a trend towards larger projects and more private sector involvement through the

International Finance Corporation (IFC). The first allocation of the newly established Clean Technology Fund will allow the development of private sector hydropower to be counted as a renewable energy source. Turkey is among the first to receive financing from the CTF and is expected to invest in hydropower.

Although the paper argues that hydropower projects both allow better management of water resources and offer an alternative

to fossil fuels, it also acknowledges that hydropower "is and will remain risky and sometimes controversial".

According to Bank estimates, 77% of feasible hydro potential in developing countries in unexploited. However, Peter Bosshard from the NGO International Rivers argues that estimated would be much lower if the Bank incorporated environmental and social costs. But the Bank claims that its new sustainable approach fully internalises the impacts on affected populations, incorporates responsible environmental management, leverages development opportunities such as benefit sharing with local

populations, integrates economic, social, environmental values for analysis and integrates questions of institutional development such as compliance mechanisms.

Several major NGOs are working together with the World Bank on hydropower initiatives and how to get them right. WWF and Oxfam participate in the Hydropower Sustainability Assessment Forum, which will develop a new sustainability assessment tool this month. However, even the Forum has been criticised because the guidelines might replace the tougher framework developed by the World Commission on Dams and because affected communities are not formally represented.

Source: brettonwoodsproject.com

Shell Springboard open for awards



Shell Springboard is now open for a fifth round of awards. Launched in 2005, Shell Springboard is a seed fund that provides awards of up to £40,000 to selected small businesses that have potentially commercial ideas for innovative products and services that contribute to combating climate change.

Since its launch, Shell Springboard has awarded more than 1,300,000 to low carbon business ideas in the UK. In the first four years over 750 entries were received. 35 businesses have received awards of between £20,000 and £40,000.

For your chance to receive a cash boost of up to £40,000, apply online at www.shellspringboard.org before 6 November. Awards will be made in early 2010. Previous winners cannot apply.

Ashden Awards 2010



The Ashden Awards for Sustainable Energy is now calling for entries for its 1020 awards. Each year the Ashden Awards looks for ground-breaking local sustainable energy solutions to compete for an Ashden Award. For more details, visit www.ashdenawards.org. The deadline for entries is 27th October.

BHA Micro-hydro seminars 2009



Our third micro-hydro seminar of 2009 took place in July at the Glanusk Estate in Crickhowell near Powys, Wales, with yet another great turnout of 50 delegates attending from the surrounding counties.



Grenville Ham of Green Valleys

As well as the standard talks on project lifecycle, case studies, EA licensing and generating a return, there was an inspirational presentation from Grenville Ham from The Green Valleys, which was recently awarded £20k by reaching the final of The Big Green Challenge and is a strong contender to win the £1m prize to be announced in November this year. Green valleys has redeveloped several redundant hydro schemes so far and identified many more in the



The turbine at Llanover Hydro

Brecon Beacons National Park that are in various stages of planning and development.

A site tour of the Llanover Hydro (one of the Green Valleys projects) led by owner Alan Williams concluded the day. The site has a 10kW system generating approx 50MW hrs a year, the majority of which is sold to the National Grid.

The BHA is grateful to all the speakers who make these events so successful and looks forward to their continued support at our future seminars throughout the year. See Forthcoming Events for details of the 2009 programme.

RUSHLIGHT AWARDS

www.rushlightawards.co.uk

CALL FOR ENTRIES

Deadline 31 October 2009

The Rushlight Awards are a promotion and celebration of the significant achievements of organisations developing technology and innovations in renewable energy, clean fuels, power generation, green products and services, water, waste and pollution management.

They are a community which is providing support for the further development of clean technology and improved environmental standards.

There are 28 initial categories with every entry having the chance to win up to a further 2 awards, including the prestigious overall Rushlight Award, which will be presented at a Gala Dinner at the Grand Connaught Rooms, London on 28 January 2010.

The awards are open to any organisation with operations in or registered in the UK or Ireland. Download an entry form from www.rushlightawards.co.uk or contact Venture Media: 020 8870 9345 or info@venturemedia.co.uk

HYDRO DEVELOPMENTS....

FORESTRY COMMISSION SCOTLAND **opens doors to hydro**

Efforts to maximise the contribution of Scotland's forests to generating clean, renewable energy have opened the door to the potential of small-scale hydro developments on the national forest estate.



Inverlael

Forestry Commission Scotland (FCS) is inviting interested parties to help develop the potential for run-of-river hydro schemes at locations across the country and to come forward with proposals for development.

Environment Minister, Roseanna Cunningham, announced the move at the opening of RWE npower renewables new hydro scheme at Inverlael last month.

"Tackling the impact of climate change is a number one priority

for everyone – and that is why the Scottish Government has committed to 50% of Scotland's electricity being generated from renewable sources by 2020.

"This is an ambitious but achievable target and working towards it will not only help us to reduce greenhouse gas emissions and create clean energy, but will also generate employment and wealth for local communities – both in the long and short term.

"Small scale hydro schemes make an important contribution to our renewable energy capacity and this one at Inverlael, built on the national forest estate, is a good example of how the private sector and Scottish Government can work together to take Scotland towards a greener future.

"But the national forest estate has more to contribute towards realising our commitment to renewable energy and the Commission is pleased to announce today that it is inviting interested parties to come forward with proposals and suggestions for more small scale hydro schemes on the national forest estate."

Existing small-scale hydro developments on the national forest estate, such as at Braevallich near Loch Awe, Garbhaig at Loch Maree and Glenskiagh near Garve, can generate 11.9 MW of power. Plans are underway to develop schemes that can generate a further 17MW and it is estimated that there is further potential of at least 50MW - enough to power 40,000 homes.

As well as looking for commercial partners, the Commission will continue to welcome approaches from communities with an interest in developing local hydro schemes. These will be considered under existing arrangements, which include the possibility of acquiring or leasing suitable sites under the National Forest Land Scheme.

Mary Drury, project manager for BHA sponsoring member RWE npower renewables, said:

"Inverlael is a good example of how the Forestry Commission - as custodians of Scotland's forestry resource - and we as a leading operator of small hydro schemes in Scotland, can work together to realise good renewable energy projects for Scotland.

"Our ongoing development programme continues to build on these achievements and we hope to be part of the effort to release the remaining hydro potential on the national forest estate."

For more information, visit www.forestry.gov.uk/windhydro

Source: Forestry Commission Scotland

South Lakeland to power up to 350 homes

Work is about to start on a hydro scheme at Beck Foot Farm, close to Duddon Bridge, It should be up and running by April 2010 and will generate electricity for the National Grid using water from Logan Gill, an offshoot of the River Duddon.

BHA-member and Managing Director of Ellergreen Hydro, Mark Cropper, was granted planning permission for the project by the Lake District National Park Authority (LDNPA). The first application went before the LDNPA's planning committee in July but a final decision was not reached until August because of worries from owners of neighbouring properties regarding tap water quality. A condition was established that Ellergreen Hydro must connect neighbour's properties to the nearby main if they experience problems with their water.

Source: nwemail.co.uk

HYDRO DEVELOPMENTS continued....

More hydro for Cumbria

A green energy scheme planned for Killington Reservoir near Kendal will use water and wind power to generate electricity for 2,300 homes. British Waterways want to install a small-scale hydro scheme and two 80m wind turbines at the lake near junction 37 of the M6.

The proposal is part of their plan to build 50 wind turbines and associated hydro schemes on land it owns over the next five years. Revenue from the scheme would be reinvested in the UK's 200-year-old network of canals and waterways, with a separate annual fund of £12,000 to spend on community schemes. Partnerships for Renewables, a Carbon Trust majority owned

company working alongside British Waterways, are confident they can submit a planning application for Killington by the end of 2010.

A feasibility study is already underway but it is not yet known the expected capacity of the hydro scheme, which is likely to be installed within Killington's dam.

Source: thewestmorlandgazette.co.uk

New life for ironworks site

A bid to breathe new life into Bellingham's ancient ironworks has been launched by local enthusiasts.

The scheme would see part of the foundry site, closed for 150 years, re-opened as a source of renewable energy with the installation of a hydro scheme in the Hareshaw Burn. It is hoped that the scheme would also include an environmentally-friendly café and education centre.

The project has been submitted to the Big Lottery Fund's Village SOS programme. A national campaign run in conjunction with the BBC, which will see six villages across the country finally selected to receive up to £400,000 each in grants towards their schemes.

Bellingham ironworks provided a fifth of the iron used to build the iconic High Level Bridge between Newcastle and Gateshead. But its success was short-lived and the ironworks went into decline after 10 years, ruined by the failure of the Border Counties railway to reach the village in time. Power from the ironworks came from a dam on the Hareshaw Burn, the bulk of which survives today as a scheduled ancient monument. It is this dam which would provide the centre point of the hydro scheme. The target date for completion of the scheme is December 2010.

Source: hexham-courant.co.uk

Loch Rannoch floodgates to be replaced

Three 1930's floodgates at Loch Rannoch are to be replaced under a refurbishment contract. During the 20-month contract, Aberdeen-based Enterprise Engineering Services will undertake detailed design work and produce a three-dimensional model of the gates prior to their manufacture in its Aberdeen workshop, as well as replacing headgear at Rannoch Weir.

Source: thescotsmen.com

Alport Mill hydro scheme completed

A riverside mill dating back to the time of the Domesday Book has become the Peak District's first mini-hydro-power station.

Building on Alport Mill's water turbine, which will power 70 homes in Alport village and save 100 tonnes of CO2, is now complete. The 30kW turbine will generate power from the River Lathkill. BHA member Derwent Hydro designed then built the power station over two months. The finished project includes a self-cleaning filter, low-profile powerhouse and buried electrical cables to link the turbine with the village.

Source: bakewelltoday.co.uk



NEW MEMBERS

The BHA would like to welcome the following new members:

- **Dyrhoff Ltd** – A Company member supplying rubber dams and spillway gates.
- **Green Highland Renewables Ltd** – A Company member specializing in developing small to medium-scale hydro schemes, providing consultancy services through the process of design, procurement and operation.
- **Heidra Ltd** – Dartmoor-based Correspondent member developing hydro schemes and offering resource assessment, planning and design, as well as manufacturing turbines.
- **The Green Company Ltd** – A Correspondent member and new consulting company based in Wakefield working with councils and communities, offering project management and installation.
- **Michael Brown** – Private member focusing his career on renewable energy, with a particular interest in micro-hydro.

HYDRO DEVELOPMENTS continued....

Skye hydro scheme a step closer

A community hydro scheme on the Isle of Skye has moved a step closer after Scottish government ministers approved a local claim on a reservoir.

Camuscross and Duisdale Initiative (CDI) has heard in early August that its registration of interest in Duisdale dam had been formally accepted, meaning directors can commission a feasibility study to find out if buying the Scottish Water-owned reservoir for electricity production is practical and affordable. But before that can happen, Scottish Water must confirm to ministers that it wishes to sell the reservoir. A government appointed district valuer will decide the price tag and both CDI and Scottish Water can appeal if they feel the valuation is unfair. If CDI withdraws its interest or cannot raise the cash in time, Scottish Water will sell the dam by public auction as it originally intended.

Meanwhile, invitations for consultants to draw up the feasibility study have been placed on the Community Energy Scotland website. Scottish Water put Duisdale reservoir up for sale by public auction at a Glasgow auction house in February. CDI directors, who only found out about the sale days before, persuaded the utility to halt the sale until it investigated the possibility of buying the dam for community benefit. How much investment would be needed to install a turbine and associated equipment is not yet known, but much of the infrastructure is already in place.

Source: obantimes.co.uk



The Dales waterwheel scheme

Waterwheel could be turning again all over the Yorkshire Dales National Park is a scheme to generate electricity is backed by landowners and residents. Nearly 50 potential sites have been considered in a study commissioned by the Yorkshire Dales National Park Authority (YDNPA).

BHA member Inter Hydro Technology (IHT) carried out a feasibility study on 49 potential sites and has concluded that there are many worthwhile opportunities, although more detailed work involving environmental impacts and constraints is required and the economic viability of some sites may be improved by further investigation.

Source: cravenherald.co.uk

Power from the River Trent

A firm hoping to build two hydro plants on the River Trent has applied for planning permission. The stations, which would be built at Sawley and Gunthorpe weirs, would generate enough electricity to power 2,000 homes. The Small Hydro Company has put forward the plans as part of a wider scheme that will see 25 hydro stations built on rivers including the Trent and Severn.

Both installations will use Kaplan turbines, which will be built in concrete channels within and below the existing weirs. Construction of the schemes will involve raising the height of the existing weirs to preserve river depth for navigation. Fish screens and passages will also be installed and both plans include flood gates to ensure they do not create additional flooding risk.

The Gunthorpe plans would see three turbines installed, providing enough renewable electricity to supply 1,200 homes, and two turbines would be installed at Sawley, generating enough for 800 homes. Both projects would take about six months to complete once planning permission is granted.

Source: thisisnottingham.co.uk

CURRENT CONSULTATIONS

- Defra: Proposals for time-limited abstraction licences
- Defra: Modernisation of salmon & freshwater fisheries legislation
- DECC: Consultation on Renewable Electricity Financial Incentives
- DECC: Improving grid access

For more details, contact Adrian Abbott, Policy & Consultations Manager on Adrian.abbott@british-hydro.org.

HYDRO DEVELOPMENTS continued...

Village of the Year to invest winnings in hydro

The South Oxfordshire community of Goring-on-Thames was named Village of the Year for 2009, beating 11 other villages. It wins £1,000, which residents will put towards the village's hydro scheme to generate electricity from the Thames. Goring plans to raise £1m to fund the hydro project.

Source: [bbc.co.uk](#)

Ventus Funds reach £50m for investment in renewable energy projects

Climate Change Capital's Ventus Funds have successfully raised a further £13.85m for investment in the UK renewable energy sector, bringing the total raised since their launch in 2005 to over £50m.

BHA member The Ventus Funds are specialist venture capital trusts focused exclusively on making investments in the small to medium sized UK onshore renewable energy sector and are the largest group of funds of their kind. Since 2005 The Ventus Funds have invested £30m in over 25 companies, contributing to the delivery of over 50MW of new generating capacity.

Source: [Climate Change Capital](#)

Area of Outstanding Natural Beauty may offer hydro generation

The potential for hydro-electric generation is being investigated by the Nidderdale Area of Outstanding Natural Beauty (AONB), which has commissioned consultants to carry out a hydro feasibility study to find sites suitable for mini and micro-hydro schemes. The consultants will gather vital information about the environmental impacts and regulatory constraints that could affect hydro development.

The study follows EA support for the development and growth of hydropower in England & Wales, which should make projects quicker and easier to implement.

Source: [yorkshirepost.co.uk](#)

CAREERS

Situations Wanted:

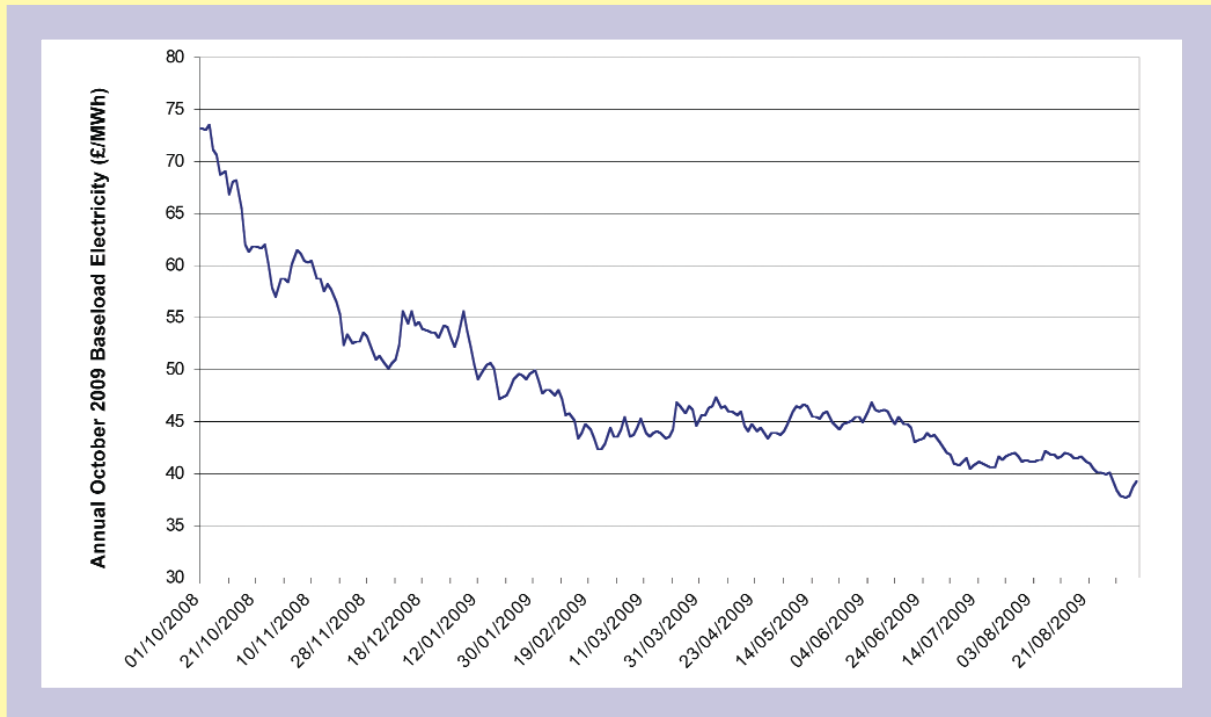
- Simon Hills is a recent graduate with an MSc in International Development. He has experience of working on small-scale hydro projects in Peru and the UK and has written a number of articles on small-scale hydroelectricity, climate change and energy consumption in developing countries. In the UK, he has concentrated on the day-to-day maintenance of two mini-hydro projects, along with compiling socio-economic data relating to these projects as well as energy consumption patterns. Simon is fluent in English, Spanish and Japanese and has intermediate skills in French. He is computer literate and is a highly motivated and adaptable worker. He can be contacted on 01629 825273 or 07596 672484 or by email at simonhills_80@hotmail.com or Skype at [simonhills_80](#).

Situations Vacant

- Code for Sustainable Homes Assessor: Brooks Devlin is a small Environmental Design Consultancy based in Bridport, Dorset and is seeking a new team member to assist in delivering their increasing workload. The successful candidate will preferably have other BREEAM and SAP accreditations. For more information, visit www.brooksdevlin.com. Interested parties should call 01308 428918/428917 and speak to Nick Devlin or Julian Brooks. Alternatively, email enquiries@brooksdevlin.com.

Market Report

from Tim Foster, SmartestEnergy



Down in the Doldrums – continued lethargy in the UK Energy Markets.

The malaise in the UK energy markets has continued for much of the summer with low demand, mild weather, continued economic gloom and system margins telling the tale.

Surprisingly oil has been on an upward trend since February, however, unlike the monumental rises last year, there has been little correlation between crude oil and natural gas prices. Natural gas supply has been plentiful, with further Liquefied Natural Gas (LNG) facilities commissioning during the last 6 months, leading to gas fired Combined Cycle Gas Turbine (CCGT) plant delivering the baseload power all summer long. This, combined with benign weather has led to prompt electricity prices finding a floor at c.a. £30/MWh this summer, with peak power prices

correspondingly very depressed.

Looking into the coming winter it is difficult to see any change in the fundamentals, with gas fired CCGT delivering the baseload power and therefore global gas prices and that of LNG in particular, will drive electricity prices. We do appear to be well supplied with gas and despite the possibility of further rises in oil prices, a mild weather forecast and reasonable system margins are likely to keep electricity prices towards the bottom end of the range experienced over the last 18 months.

In summary there is little on the horizon to pull electricity prices out of the doldrums. Plentiful gas and high system margins are likely to keep prices trading in a narrow range and order for prices to “breakout” of current levels we do need to see a significant change in market fundamentals. Despite potential further increases in crude oil prices the big unknown, and potentially the

big market driver, is whether industrial and commercial demand for energy will come back to previous levels. Will the green shoots of economic recovery grow and blossom?

ROC Market Update

It interesting to note that falling electricity demand in the UK has also depressed ROC prices with Compliance Period 7 (i.e. for generation between 01/04/08 to 31/03/09) values currently forecast £2-£3 per ROC lower than turn of the year. It has been suggested that there could be a counter-effect to the reduction in demand brought about by the credit crunch; i.e. fewer ROC are issued because of withdrawn finance for renewable projects, however, this has yet to manifest itself in new accreditation available information and it also appears anecdotally than Financiers are still keen to invest in quality renewable projects.

Looking further forward there is also much uncertainty around

how much new generation will opt for the Feed in Tariff (FIT) as opposed to ROCs. If there is significant take-up by projects that have been earmarked for the ROC route, then there could be a significant (upward) effect on ROC prices, however, until the FIT is implemented it is impossible to gauge the actual take-up versus that implied by the various consultation reports.

Market remains illiquid with few visible trades in the market outside of the NFPA e-ROC auction.

Auction prices provide a generally reliable guide but volumes remain limited.

Tim Foster is Head of Business Development at SmartestEnergy Limited – the UK’s leading independent provider of Power Purchase Agreements to electricity generators. For further information please visit www.smartestenergy.com, phone 0207 4480900 or email ppa@smartestenergy.com

INTERNATIONAL NEWS

RUSSIA: Fatal explosion at RusHydro plant in Khakassia republic

There is now very little hope for the 64 workers missing after the fatal explosion that flooded the powerhouse at RusHydro's 6.4GW Sayano-Shushenskaya hydroelectric plant in East Siberia.

At the time of writing, rescue workers were still searching for survivors in the flooded 287m long powerhouse, and 1000 employees had been brought in to reinforce the 100 strong rescue crew at the plant where at least 11 people were killed and 14 were injured on 17 August when a huge pulse of water burst into the facility's main machine room. Because of the freezing temperatures survivors could only be expected now if they were lucky enough to have been inside an 'air bubble' protecting them from the freezing, 4°C, water.

The plant in the Khakassia republic, four time zones east of Moscow, is the country's biggest, with a 245 m high concrete dam holding a reservoir stretching over 621 sq km. There is still some disagreement about the cause of the tragedy. A manager and former director of the station, employed by the plant's owner RusHydro, has suggested that a technical fault in a turbine was to blame for the disaster. Energy minister Sergei Shmatko had already ruled out a transformer explosion or repair works, two explanations put forward previously. It has been reported that engineers had warned in 1998 that the dam's foundation was weak because of misconstruction faults and that there was a real danger that the giant concrete construction might collapse.

Immediately after the explosion several of the plant's ten generating units were found to have been damaged. The concrete arch gravity dam was not affected by the accident, RusHydro reported. Operations were suspended, water in the system was drained down and inflows to the reservoir spilled by the partial opening of all 11 of the dam's gates.

Investigations into the cause of the accident continue. RusHydro said that early views suggest that possibly there was some hydraulic equipment rupture or failure, and partial destruction of the powerhouse. Heavy damage was suffered by the hydraulics of units No 7 and No 9. Parts of the building structure fell on units No 3, 4 and 5. RusHydro said a week before the disaster that the 6.4 GW facility, completed in 1985 on the Yenisei river, had been benefiting from higher inflows and was expected to continue to do so over the next couple of months. The plant was being operated at a higher load and this, too, was planned to continue.

More than 15 000 GWh had been generated by the plant in the year so far. One of the 10 generating units (No 6) has been undergoing refurbishment since January and the work was due for completion this month. It was commissioned in 1981, three years after the first units were brought into service.

The Sayano-Shushenskaya subsidiary company within RusHydro has a total of 6721MW of installed capacity in two plants. Sayano-Shushenskaya is the flagship of RusHydro's expanding fleet, which consisted of a total of 25 336 MW of installed capacity at the end of 2008.

Source: waterpowermagazine.com

INDIA: Himachal Pradesh to develop 50 micro- hydro projects

Himachal Pradesh, which has a potential to generate 20,416MW of hydropower (25% of India's total potential), has decided to set up 50 new micro-hydro schemes with the help of small payers, the State Energy Development Agency has announced.

The projects up to 2MW would be allotted only to the residents of Himachal Pradesh. Under the state's amended power policy, it will get free power from all allotted projects. The fixed quota for projects up to 5MW is 6% free power for the first 12 years, 15% for up to 30 years, and 24% for up to 40 years. After 40 years the project will be handed over to the government. To encourage small entrepreneurs, the government is not charging any upfront premium for these projects. However, for projects above 5MW the fixed upfront premium is Rs 2 million per MW, which is in addition to free power bidding. The average cost of a project is RS 70 million per MW.

Himachal Pradesh has abundant water resources, with five major rivers flowing down the slopes of the Himalayas. Eleven projects with a combined capacity of 1,124 MW are under execution by the Himachal Pradesh State Electricity Board, whereas 15 projects with a generation capacity of 1,738 MW are under execution by private companies. The region had generated 6,229 million units of power in 2007/8, out of which 5,029 million units were sold outside the state.

Source: samaylive.com



INTERNATIONAL NEWS continued....

LAOS: Nam Theun 2 goes online

The Nam Theun 2 1,070MW hydroelectric power station produced its first kWh during tests on one of its six turbines. The tests were conducted by EDF in coordination with Nam Theun power Co, a 35% subsidiary of EDF, and will continue until the power station is finally brought online, which is expected at the end of the year.

Nam Theun 2 is equipped with four 240MW turbines producing electricity for Thailand's power network, and two 37MW turbines producing electricity for Laos. 95% of the energy produced will therefore be exported to Thailand via a 138km high voltage transmission line. The remaining 5% will meet 20% of Laos's annual electricity needs.

Hydro is the first renewable energy harnessed by EDF. Nam Theun 2 is a major project for the group in Southeast Asia and employed more than 9,000 people when the work was at its peak. Construction at the site was accompanied by an exemplary social and environmental commitment in collaboration with the government of Laos, local people and international financial backers, including the World Bank, the Asian Development Bank, the European Investment Bank and the French Development Agency.

Source: uaelp.pennet.com

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OVERSEAS TRADE LEADS

The BHA receives numerous overseas trade leads regarding opportunities for UK companies to develop their business on a global level. Details of these are circulated to Company, Principal Company and Sponsoring members, in line with our membership structure.

Should you wish to be included in the dissemination of this invaluable information, please contact Nicki at the BHA – tel: **01258 840934** or email info@british-hydro.org

NEPAL: Small hydro projects lure banks

Spurred by Nepal Rastra Bank (NRB) policy to bring investments in hydro-electric projects of up to 50kW under a priority loan scheme, banks have now set out to seek clients.

Pashupati Bikash Bank and Araniko Bikash bank of Kavre have already invested in five small hydro projects, all in remote places. This is the first time that banks have extended their investments to the backwoods of Koshihari, Roshipari and Dandapari.

The Energy Sector Assistance Program predicts that it will take some Rs 4.5 billion to produce an estimated 13,710kW of electricity from small projects by 2012.. Half the costs will be covered by the government, local bodies and through labour contributions, while the other half will remain open to the banks.

Source: myrepublica.com



ROMANIA: Hidroelectrica to build first hydro-power plant since 1990

Romanian state-owned hydropower firm, Hidroelectrica, will complete construction of a hydro scheme on the Jui River in 2012 at an estimated cost of 200 million Euros.

The new scheme will function without a barrier lake, unlike the country's other plants built before 1989. It will comprise two plants in the same area, each of which will have three units. The first plant will have an annual production capacity of 38GWh per year, the second a capacity of 177 GWh per year.

Hidroelectrica will upgrade its hydropower plant in Bicaz, a unit in Islaz, and the third plant on the Daube River in 2010. The Company, owned by the Economy Ministry, produces the cheapest electricity in Romania.

Source: romaniantimes.at

INTERNATIONAL NEWS continued....

TURKEY: Insurers pull cover of controversial project

A consortium of German, Austrian and Swiss insurers pulled export credit coverage of a controversial dam project, citing concerns that authorities were not adequately protecting the people and historical sites in southeastern Turkey, when Turkish authorities failed to meet a July deadline to comply with requirements assuring that the Ilisu dam project would have a minimal effect on the people, environment and ancient archeological sites.

Controversy has surrounded the €1.1bn project since construction began in 2006. Opponents have argued that flooding to create a reservoir holding 10.4bn cubic meters of water could destroy archeological treasures and force resettlement of tens of thousands of people. Plans had called for the dam to be completed by 2013, it is part of the Anatolia Project, a program to provide irrigation and power to the basins of the Euphrates and Tigris rivers. The project aims to build 22 dams, 19 hydro plants and irrigate 1.7n hectares of land.

Source: businessinsurance.com

USA: Recovery Act funding to modernize hydropower infrastructure

The US Department of Energy (DoE) has announced up to US\$32m in Recovery Act funding to modernize the existing hydropower infrastructure in the USA, increase efficiency and reduce environmental impact.

The DoE investment is designed to support the deployment of hydropower turbines and control technologies to increase power generation and environmental stewardship at existing non-Federal hydroelectric facilities. The Funding Opportunity Announcement under the Recovery Act will be competitively awarded to a variety of non-federal hydropower projects that can be developed without significant modifications to dams and with a minimum of regulatory delay.

The projects will be selected in two areas, hydropower upgrades at projects <50MW and >50MW, and are expected to begin in 2010.

Source: renewableenergyfocus.com



VIETNAM: Mott MacDonald to work on Song Bung 4

Mott MacDonald has won a contract to undertake design reviews and monitoring as well as provide advice and supervision and knowledge transfer services for the Song Bung 4 hydro project under development in Vietnam. The Consultant was awarded the contract by Song Bung 4 Hydropower Management Board, which is part of Electricity of Vietnam (EVN).

Song Bung is under construction in Quang Nam province. The 156MW project involves construction of an RCC dam, a 7.2m wide headrace tunnel, a 16m diameter surge shaft and a powerhouse (65m x 20m). The dam height was given as 114m and the headrace as 3.2km although previously the Asian Development Bank (ADB) has noted the dimensions as 110m and 3.1km respectively.

Mott MacDonald said the contract on the US\$267m project involves design reviews, technical advice and assistance with procurement, resettlement advice and monitoring, environmental management advice and monitoring, construction supervision and also knowledge transfer.

It added that the contract is under a programme funded by ADB. The bank recently approved a US\$91m loan for the project, which is due to be completed over 2013/14. The balance of funds will be provided by EVN and the Vietnam Development Bank.

Source: waterpowermagazine.com



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is hosting seminars in Edinburgh (1st October) and London (5th October) which will notify Users of the latest activities. For more information, please email to transmissionconnections@uk.ngrid.com.

RENEWABLES FUTURES 2009

10th & 11th November 2009 – Assembly Rooms, Bath
www.regensw.co.uk/eventhq

OFFSHORE GRID CONFERENCE

24th November 2009 – Edinburgh International Conference Centre
www.ct-live.com

RENEXPO AUSTRIA

26th – 28th November 2009 – Trade Fair Centre, Salzburg
www.energie-server.de

THE UK'S RENEWABLE ENERGY STRATEGY

2nd December 2009 – venue to be confirmed (central London)
www.westminsterforumprojects.co.uk/weetforum/events.html

SMART METERING FORUM 2009

2nd & 3rd December 2009 – Le Méridien Piccadilly, London
www.marketforce.eu.com/metering

ENERGY NOW EXPO 2010

17th & 18th February 2010 – Three Counties Showground, Worcestershire



Conference focusing on all aspects of renewable energy, as well as practical demonstrations of products and services. Suppliers and developers will have the opportunity to exhibit over both days to increase market awareness and business levels.
www.energynowexpo.co.uk

For more details of any of these BHA events, please contact us at info@british-hydro.org or tel: 01258 840934, or visit www.british-hydro.org:

BHA ANNUAL GENERAL MEETING (AGM) 2009



09.30 – 12 noon, 14th October – Art & Design Academy, John Moores University, Liverpool

Please register your attendance or apologies with the BHA.

BHA ANNUAL CONFERENCE 2009

“HYDRO IN THE DRIVING SEAT!”



14th & 15th October – Art & Design Academy, John Moores University, Liverpool

Our 8th Annual Conference aimed at the whole of the hydropower industry and its associated stakeholders. *Sponsorship packages and exhibition spaces are available – contact Ellan for more details (tel: 01258 840934 or email: ellan.parry@british-hydro.org).*

BHA PAVILION AT HYDRO 2009



26th – 28th October – Lyon, France

UK Exhibition Pavilion and Networking Reception at this leading international hydropower conference and exhibition. *If you would like more details or are interested in participating on the high-profile UK stand, saving money and time, please contact Ellan at the BHA (tel: 01258 840934 or email: ellan.parry@british-hydro.org). Spaces are limited and on a first-come, first-served basis!*

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