



This newsletter aims at keeping members up to date with a range of news articles including updates on consultations, policies, funding and research opportunities, forthcoming events, career and recruitment news, and trade leads in all areas of the UK hydropower industry.

CONTENTS

	<u>Page</u>
➤ BHA Micro-Hydro Seminar – Plymouth	2
➤ BHA Media Frenzy Continues....	3
➤ Brief Update on Northern Ireland Issues	3
➤ BHA AGM & Annual Conference	4
➤ All-Energy 2007 BHA Hydro debate “Take the Hydro Road”...	5
➤ What Else Has the BHA been up to...	6
○ Welsh Assembly interest in Hydro.	6
○ Hydro/renewable Energy Potential in Indonesia	6
○ Environment Agency Good Practice Guides – an update	6
○ SEPA – River Basin Management Planning	6
○ BHA Meets new DTI director	6
➤ General News & Information	
○ A Bank Worth owning – Triodos Announces Opportunity to Invest	7
○ SSE Seeks to Build 2.5MW Plant near Crainlarich.	7
○ New Secretary General at Eurelectric	7
○ Dolgarrog Celebrates 100 Years	8
○ A new name, a new game? DTI sees some changes.	8
○ Restoration of Hydro Plant in Wales Teaches Children.....	9
○ Brignall Mill Micro-hydro Project	10
○ The Energy Markets Bill	10
○ BHA Welcomes Climate Change Bill	10
➤ Exposure – Hydro News from Around the Globe	
○ Hydro 2007 - Granada	11
○ 1 st Very Low Head Turbine is Commissioned	12
○ World Bank Powers Hydroin Sri Lanka	12
○ Across the pond....articles from the US and Canada	13
➤ Current Consultations	16
➤ New Members	16
➤ Member Offers & Discounts	17
➤ Trade Leads	18
➤ Forthcoming Events	20
➤ Shout about it.....	21

The BHA is sponsored by:-

BHA Micro-Hydro Seminar - Plymouth

With the generous support of the University of Plymouth and the Royal Academy of Engineering, we held the fifth BHA Micro Hydro Seminar in the sumptuous surroundings of the University. Also providing valuable assistance and input were Regen SW and Devon Association for Renewable Energy (DARE) / Dartmoor Water Power Group.

As a region, Dartmoor and its environs is a well developed hydro resource and the speakers and audience were very knowledgeable and willing to share their experience and expertise. Questions and discussions were detailed and covered a large range of topics and extremely useful networking developed during the day.



View from Plymouth Hoe



Edward (Joddy) Chapman



Dr Phil Maher

Our speakers were:

- **Keith Gillanders, Head of Business Development, Regen SW** - Keith opened the seminar with an extremely interesting review of Renewable Energy in the South West comparing statistics from a number of sources. He then went on to describe the present and potential worth of hydropower in the region.
- **Len Careless, Team Leader, Regulatory & Technical (Water Resources), Environment Agency** - The Environment Agency perspective of hydro projects – Len detailed the need for consents for abstraction and impoundment and fish issues with regard to water turbines. (DAW outlined the work being carried out to produce Good Practice Guides to assist EA officers and provide a consistent national approach to the licensing process.)
- **Chris France, Dir. of Planning & Sustainable Development, Dartmoor National Park Authority** - An outline of the National Park Authority's planning policies and approach to small-scale renewable energy projects, including a case study of micro-hydro schemes which have been built in the Park and supported by the Sustainable Development Fund.
- **Marc Sheikh, Hydro Engineer, Hydro Generation Ltd** - A Consultants View – giving detailed description of development of a micro hydro site from feasibility study to commissioning based on a great deal of experience especially in the redevelopment of water mills.
- **Dr Phil Maher, Pico Energy Ltd** - Phil described low cost but reliable turbine-generator combinations that can generate significant quantities of electricity from even very small streams. A combination of standardised design and partial DIY installation to help to cut to projects costs and modern versions of the traditional waterwheel can also be used effectively for electricity production particularly at former mill sites.
- **Edward (Joddy) Chapman, The Rock, South Brent** - Case study - the installation and operation of a domestic stand-alone hydroelectric scheme. Utilising the weir and part of the leat of a derelict 18th century mill, a garden lily pond was replaced with an 8' diameter overshot GRP waterwheel driving a synchronous alternator via a gearbox and belt speed step-up. Joddy described the mill rehabilitation process and the unique operation of the wheel.
- **Richard Pymm, Director, Devon Association for Renewable Energy (DARE)** - A detailed description of DARE and The Dartmoor Water Power Group and the work they are carrying out on behalf of members. It currently has 20 members representing 18 sites, with projects varying from refurbishing old mill sites of 2kW to a new-build site of 100+kW.
- **Chris Elliott, Western Renewable Energy Ltd** - Case study - the new River Dart Country Park Scheme operates on a low head and consists of a 45kW Archimedes screw, which is a large, slow-turning machine that is tolerant to debris and requires no fish screening. It is the first of its type in the UK and is scheduled to provide a 4.5 year payback period.
- **Tim Foster, SmartestEnergy Ltd** - SmartestEnergy Ltd is a leading UK purchaser of power for the independent generation sector. Tim gave an explanation of obtaining the optimum income for small hydro schemes. This generated a healthy debate covering many issues in this area.

Site Visit

- After lunch many of the delegates and speakers visited the River Dart Country Park where we were able to see the new Archimedean screw turbine supplied via MannPower, operating. We are grateful to the owner, Mr Simpson, for his hospitality on this visit.

*Contributors
to the
Scheme*



The Intake



*The
Archimedean
Screw at
River Dart
Country Park*

BHA Media Frenzy Continues.....

On my return from Aberdeen I started listening to an interview with Brian Wilson, ex-Minister for Energy, on BBC Scotland. It was clear that both nuclear and renewables development were high on the programme's agenda, along with the potential effect on generation in Scotland under the new administration. A quick call from a lay-by near Dundee managed to get me a slot on air towards the end of the programme and I made the point that both existing and new hydropower is still important to Scotland's energy mix and security of supply. Mr Wilson praised the work of Tom Johnston and said he was pleased to have been instrumental in the refurbishment of many of the projects started by the North of Scotland Hydro-Electric Board (NOSHEB).

David Williams, Chief Executive, BHA



Croatia TV films hydro in the UK

The British Embassy in Zagreb has instigated a documentary to be made by Television Croatia entitled "Renewable Energy – UK leads the way". This has been undertaken by the News Documentary department who make programmes similar to "Panorama". The particular unit which is making three visits to the UK makes programmes about elements of EU countries in preparation for Croatia being a member state.

During the first visit the BHA was able to provide access to Heron Corn Mill and Coniston Hydro in Cumbria. The message was one of the development of micro and small hydro under the Renewables Obligation. Audrey Steeley, Manager of Heron Corn Mill and David Williams were interviewed to provide background and general information.

Future filming in August and later in the year will take place in Scotland and Wales. We hope to film larger hydro during one of these visits.

David Williams, Chief Executive, BHA

Croatia TV interview Audrey Steeley



Brief Update on Northern Ireland Issues

Abstraction Licenses

As you are aware it is a legal requirement from 1st February 2007 that you have an Abstraction and Impoundment License. As a test run, I applied in March for a License for a new hydro project and after discussions, the EHSNI were satisfied that this would have no effect on the aquatic ecology and I expect them shortly to issue the License for the abstraction and impoundment as applied for. During the course of the discussion, EHSNI said that all existing hydro schemes would be granted a License on the basis of existing use and without charge up until 31st January 2008. So it does look as though our response to the Consultation last summer has been to a degree recognised and I would therefore suggest you do make the application – you will find that the application form is very poorly written and not really designed for what we do.

Furthermore, we had discussion about variation or termination of a license and rather surprisingly they mentioned that to do so, perhaps, the question of Water Rights would have to be addressed or purchased or even compensation paid. This is somewhat a change of heart but perhaps our Legal Submission made its way into their skulls and they are starting to realise that Government cannot just walk all over people as they like.

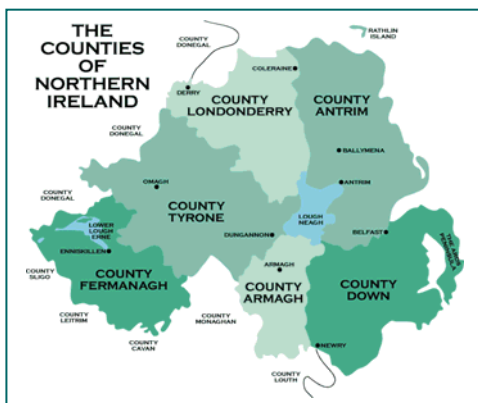
Single Electricity Market

Following up on Iain Wright's talk to us in December, I attended a meeting was held by OFREG/NIAER on Tuesday 29th May to discuss the impact of the SEM on generators and on the NIRO and what will happen on 1st November 2007 when it becomes effective.

In a nutshell, the situation is that anyone can participate in the all-island wholesale pool; this is not compulsory unless you exceed 10MW. Small generators are free to enter into bilateral contracts with any licensed electricity supplier. NIE Supply will offer a tariff linked to the System Market Price which is essentially a market of "last resort". Wheeling of electricity will cease from 1st November 2007. Of course these arrangements will not affect NI-NFFO Contracts until they expire in 2009.

There are issues for the NIRO relating to certification that the energy has actually been consumed in NI but this is really a problem for NIAUR/OFGEM and supply companies to sort out; I did not feel much enthusiasm to get involved as they spoke a language of acronyms with which I was not familiar. In all, the future looks quite bright.

Andrew Frazer, BHA NI Chairman



After a short break where we concentrated our energies on hosting and organising Hidroenergia 06, we are pleased to announce the return of our Annual Conference. This important event is being held in Birnam, Perthshire on the 10th (starting midday) and 11th October 2007 and will incorporate a diverse range of conference sessions, a technical exhibition and a gala dinner with after dinner entertainment like you have never seen before!

Hydropower in the UK and worldwide continues its roller coaster existence. It remains the premier renewable energy resource and, as the Climate Change battle begins to dominate our lives, the clamour for more and more renewable energy is becoming more important in the energy policies of most countries.

The hydropower sector has been too quiet for too long knowing its own importance and naively thinking that everyone else believes this to be true!. This is not the case and we must fight for more recognition.

"**Delivering the next generation**" will address the economic, regulatory, political and technical issues to give a clearer focus on where we develop next. As well as keynote speakers from government, media and the hydropower industry, we will have sessions covering the following topics:

- **The UK Hydro mix:** An up-to-date review of the types of hydropower available for development in the UK. This includes potential new capacity and methods of obtaining this. The roles that each type of hydro could and should take and what needs to be done to encourage development. Types of hydropower to be considered include;
 - tidal impoundment and the Severn Barrage
 - pumped storage
 - micro hydro
 - conventional storage and run-of-river hydro
 - hydro in water supply and wastewater systems.

This session will form part of the opening session with the keynote speakers in attendance.
- **Trouble at t'mill:** We continue to encounter barriers to development of hydro despite the Government's commitment to increasing generation from renewable sources. Topics can include;
 - Planning
 - abstraction licensing and application charges
 - the Renewables Obligation – what next?
 - the Public's perception of hydro
 - initial equipment and upfront costs
 - innovative ways of overcoming barriers
- **Keeping the wheels turning:** This is an opportunity for suppliers of equipment and services to have their say about;
 - New markets and products
 - research and development
 - approaches to global markets
 - how to keep abreast of competition
 - innovations and designs

We are hoping to be joined for this session by visitors from overseas who have a role in their countries' hydro sectors. They will give details of their needs in this area and companies will have the opportunity to meet with them during and after the session.

We invite you to submit your papers on any aspects connected with hydropower under the following topics. Please submit a 200 word extract no later than **14 July 2007** together with your contact details (name, address, e-mail, phone, fax) to BHA, by email to info@british-hydro.org, or by fax to 01202 886609.

EXHIBITION: Along with the conference there will be a parallel exhibition representing the whole of the hydropower sector, offering an ideal opportunity to meet with customers, colleagues and friends, both old and new. Companies interested in exhibiting should contact the BHA on 01202 880333 or email info@british-hydro.org or by fax to 01202 886609 .

SPONSORSHIP: There is an opportunity for other companies to sponsor this event. Please contact the BHA on 01202 880333. Registration and booking details will be published shortly.

Ellan Parry, Operations & Marketing Manager, BHA



All-Energy 2007 BHA Hydro Debate “Take The Hydro Road – A Change in the Air?”

The main change to the development of new hydro in Scotland is that regulation continues to get tougher; however the dialogue between the industry and regulators is improving.

To try and keep things in perspective, our debate was opened with a global view of hydropower from Alison Bartle, Editor of the International Journal on Hydropower & Dams. Having given details on present and potential development she stressed the importance of international acceptance of hydro and a political will to ensure its progress. World Bank and Asian Development Bank (ADB) support is conditional on exacting measures to ensure environmental, social and economic acceptability. This is setting standards that will be followed in the future and we must therefore accept stringent but fair regulation.

The stage was therefore set for contributions from the panel, which consisted of:

- Tim Foster, Sales & Marketing Manager for SmartestEnergy Ltd and BHA Vice-Chairman
- Sue Kearns, Head of Renewables Policy Team for the Scottish Executive
- Bill MacGregor, Hydro Development Manager for npower renewables
- Michael Wann, Water Resources specialist for the Scottish Environment Protection Agency (SEPA)
- Rodney Potts, Director of Hydro Energy Developments Ltd
- Nick Mackay, Partner of Wright Johnston Mackenzie and legal advisor to the BHA

Each panellist gave his/her view of future hydro development in Scotland, and a lively discussion followed involving panellists and members of the audience, which included potential developers and others, including Jim Cockburn, Chairman of the Fisheries Committee.

There is no doubt that developers and their agents understand the need for and issues affecting regulation in the various licensing processes. Equally, the regulatory bodies recognise the frustrations suffered by the developers. However, agreement on the degree of regulation will be difficult to achieve without considerable compromise. The ultimate threat is that hydro development in Scotland could cease – harming not only the developers but also the national targets for renewable energy generation and a healthy energy mix for Scotland and the rest of the UK.

Specific issues were discussed and the debate could have lasted well into the night! We achieved a healthy exchange of views and a commitment through various hydro working groups, stakeholder discussions, and the operation for the Forum for Renewable Energy Development in Scotland (FREDS) panel to continue striving towards the necessary compromising without prejudicing the development of this precious and plentiful resource.

David Williams, Chief Executive, BHA



What else have the BHA been up to.....

Welsh Assembly interest in Hydro

David Williams, Chairman and CEO of BHA, recently had a meeting at Dolgarrog with two employees of the Welsh Assembly Government (WAG):

Alun James – Head of Low Carbon Futures, Energy Wales

Vicky Davies – Rural Development Adviser, Technical Services Division, Department of Sustainability and Rural Development

Alun had heard of BHA's Micro Hydro Seminars in Wales in January and had sent a representative. His main initial interest was the remaining potential for hydro in Wales and our discussions with the DTI to initiate a new study on this very topic. Vicky wanted to see how new and resurrected small hydro developments would benefit the Welsh agricultural community.

The discussion ranged from micro hydro through to tidal impoundments and the Severn barrage. This helped identify potential areas of project and other assistance which may be possible through the next (and last) tranche of EU "Convergence" funding for Wales which will last for the next seven years.

Once the initial information is assimilated, we will be involved in further meetings

Environment Agency Good Practice Guides – an update

BHA has been managing a contract, funded by the DTI and the Environment Agency (EA), to produce a set of Good Practice Guides (GPG's) which will be owned by the EA and

provide its officers with a simpler and more consistent set of guidelines when considering water abstraction and impoundment applications.

The Guides were drafted by two sets of consultants earlier in the year and selected stakeholders and the EA have met to review them and discuss necessary alterations. Reasonable agreement was reached and only a few alterations are now required to get a workable draft completed. This will be a set of guides which will develop under the auspices of the EA Hydro Working Group which is a very close collaboration between the EA, the DTI, BHA and our members.

It is intended to launch the Guides at the BHA conference on 10 & 11 October in Birnam.

Hydro/Renewable Energy Potential in Indonesia

In March this year David Williams was part of a UKTI scoping mission to Indonesia to report on the potential business for the UK power industry there.

The final report will be issued in approximately two months and will be available through the UKTI website (www.uktradeinvest.gov.uk).

In advance of the report being issued, we are offering BHA members access to the draft section on Hydropower, Renewable energy and Rural electrification. Please contact info@british-hydro.org

SEPA – River Basin Management Planning

David Williams, Chairman and CEO of BHA, attended the latest National Advisory Group meeting which took the form of a workshop to identify the "gaps" and "barriers" to delivering Water Framework Directive requirements in Scotland. This was a well structured workshop with positive (and enormous!) output from the four groups looking at:

- Pollution
- Water Resources (Abstraction & Flow measurement)
- Morphology (Physical Habitat Modification)
- Alien Species

BHA was represented in the Water Resources group together with representatives from British Waterways, Confederation of Paper Industries, Scotch Whisky Association, Scottish and Southern Energy, The Fisheries Committee, Tay District Fishery Board and SEPA

Tasks of each group were to:

- Identify "high level strategic contributions which members (of the Advisory Group) to help deliver WFD requirements"
- Document proposed contributions in a report to be presented in November 2007 (with the Minister present).
- Develop a programme of measures for the draft and final River Basin Management Plans to be published in 2008 and 2009

Much of the discussion was on hydro development and it is apparent that SEPA is beginning to recognize some of the problems which their CAR licensing scheme is having on new developments. One disturbing aspect to the argument was that certain groups see the income from ROC's as being an unrealistic subsidy for the development of hydro. There was also talk (which was contested) of ROC's income being suspended should a generator break the licence agreement in any way.

Much work has yet to be done but it is encouraging that this is a forum where all parties meet and discuss relevant issues to the future of hydro development in Scotland.

BHA meets new DTI director

Duarte Figueira, formerly manager of UKTI Infrastructure Section, has recently taken up the post of Director – Renewables Deployment Team at the DTI Energy Development Unit. We met him to describe the range of hydro power potential in the UK and the path which the UK hydropower sector needs to pursue.

One of Duarte's major roles is to review and initiate ways to overcome barriers to Renewable energy development to meet the 2010 and 2020 targets. We were able to describe the difficulties our industry experiences and to discuss means by which the DTI can support positive actions to achieve improvements. We are to commence developing a cross-government hydro group led by the DTI which will extend the remit of the existing Environment Agency Hydro Working Group to include planning and other relevant departments.

We embark on a new and closer relationship with the DTI!



General News & Information

A Bank Worth Owning – Triodos Announces Opportunity to Invest

Triodos Bank, which has pioneered sustainable banking across Europe, has launched its first ever open opportunity to buy shares (Depository Receipts) in the UK. From Monday 14 May UK investors can own part of a bank that has financed thousands of Europe's most inspiring ethical enterprises – from its first forays into renewable energy finance following the Chernobyl disaster, to increasingly significant support for fair trade, organics and social enterprise. It's a bank built on savings and investments from a rapidly growing community of individuals and organisations who care about the impact of their money.

Key Facts:

- Triodos Bank is launching its first open capital raising offering in the UK
- Triodos has pioneered sustainable banking, by only lending to organisations that benefit people and the environment
- The Bank offers a compelling combination of social, environmental and financial returns
- Triodos Bank has grown quickly and profitably in recent years. Money invested will be used to support further growth; in particular, more lending to sustainable organisations, and the development of a new office in Germany.

"We're a radically different kind of bank because we put people and the environment alongside profit," said UK Managing Director, Charles Middleton today. "We start from the idea that money can transform the world for the better. And we connect people who have money to save and invest and want to change the world, with organisations doing just that."

Triodos' model has proved successful. It now has funds under management worth almost £2 billion, over 100,000 customers across a European network of offices. It's grown markedly in recent years by tapping into growth industries like organics and fair trade, and expansion has been particularly marked in the UK. Last year the UK branch's loan book increased by over 40% and its balance sheet recently passed a milestone of £300 million - money that's lent to values-led organisations like high-street natural health and beauty company, Neal's Yard Remedies. "Working with Triodos Bank makes sense professionally and philosophically," says Neal's Yard Owner, Peter Kindersley. "We strive to be ethical and sustainable throughout our business, from who we borrow from to the products we sell."

The issue of Depository Receipts launches on the 14 May and runs until 21 July. Triodos Bank is hoping to raise €40 million, or around £27 million, as part of a pan-European effort to attract more capital for the Bank. The money will be used to support further growth, so it can lend more money to more ethical organisations and to support the development of a new office in Germany. Triodos Bank already has over 9,000 Depository Receipt holders across Europe, including a small number in the UK, but this is the first open opportunity for the wider public to invest.

"We've proved that sustainable business can help tackle the most urgent problems we face. And we're delighted that people now have the opportunity to invest in us," said UK Managing Director, Charles Middleton.

To order an Offering document call 0870 7036185 or [click here for more information](#).

Source: Triodos Bank Website

SSE Seeks to Build 2.5MW Plant near Crainlarich

UK Energy Utility Scottish and Southern Energy (SSE) has applied to build a new 2.5MW run-of-river plant near Crainlarich, Scotland.

The 'Chaorach' scheme is to be fed by runoff gathered from the Allt Coire Charoach area, primarily, plus some from Allt Coire Chlach. The power house will be fed by buried pipeline and sited some 8km from Crainlarich.

SSE said in a statement that the hydro plant would only operate when there is enough flow in the river, which will ensure compatibility with environmental needs. Power will be fed into the transmission grid.

Currently, the company is also developing the 100MW Glendoe hydro project near Fort Augustus, which involves construction of a dam, power tunnel and underground power house. The project is the biggest hydro scheme to be built in the UK for decades.

Source: IWPDC

NEW SECRETARY GENERAL AT EURELECTRIC

Hans ten Berge took over as the new Secretary General of EURELECTRIC, the European Union-wide organization of electricity associations, on 12th June. Mr ten Berge, born in Eindhoven in the Netherlands, was elected to the post during the Annual Conference in Antwerp in November 2006. He takes over from Paul Bulteel.

Hans ten Berge worked in a number of international enterprises, including Exxon Chemie and Kemira Agro, before entering the electricity sector in 1998 when joined ENECO Energie in November 1998. He has been Chairman of the EURELECTRIC Markets Committee for several years

Adrian Abbot, Policy and Consultations Manager, BHA

Dolgarrog Celebrates 100 years

In 1907 the Dolgarrog hydro station, six miles from Conwy on the edge of Snowdonia National Park, started to operate providing power for the adjacent aluminium smelter. In the intervening years the station and the water supply system has grown and been continually refurbished and upgraded. The station is now owned by RWE npower renewables and houses the control centre for the company's hydro and wind assets.

On 26 June the station celebrated its centenary and 150 guests enjoyed a splendid day courtesy of npower. Tours of the extensive system of reservoirs, leats and pipelines and the latest addition to the Dolgarrog generation system – the 500kW Cwm Croesor Hydro Station – were arranged throughout the day and guests were also able to walk around the main power station (total 30MW from 5 units) and view the new control centre.

Before lunch Kevin McCullough - Managing Director, npower renewables – welcomed everyone and explained npower's commitment to renewable energy generation throughout the UK with its expanding portfolio of hydro and wind plants. He also pointed out that npower was the largest inward investor in Wales.

He then introduced the three speakers who would tell the Dolgarrog story:

- Dewi Thomas - Historian and retired employee. History of Dolgarrog from 2007 to the 1960's
- Neville Hughes – Former Dolgarrog Station Manager – Development from private ownership to public ownership and back to private again in the 1980's
- Andy Billcliff – Head of Renewables production (and Chairman of the BHA) – present operation of Dolgarrog and its place within the npower energy portfolio

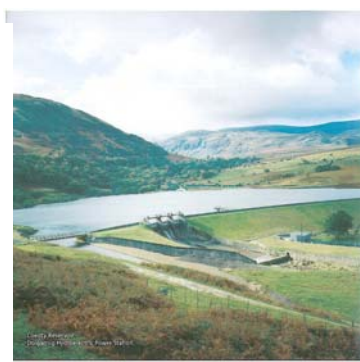
Kevin then talked of the future and introduced a very pleasant presentation of prizes to local school children who had taken part in a competition to design tiles on the subject of "Renewable energy". He explained that some of the children's ideas were worth investigating as generating potential for the future!

A wonderful day in honour of a very valuable hydro asset which beautifully demonstrates the true worth of hydro – its sustainability and longevity!

David Williams, CEO, BHA



Andy Billcliff & Kevin McCullough



Dolgarrog Coedty Reservoir



Dolgarrog Schools Presentation



Dewi Thomas

A new name, a new game?

DTI sees some changes.

Gordon Brown's reform of the Government includes the rebranding of the DTI, which is now called the Department of Business, Enterprise and Regulatory Reform (DBERR).

The major change in forming the new department under the Rt Hon. John Hutton MP is that it has shrunk considerably as a result of the Science and Technology unit (S&T) being moved to Education. The Sustainable Development Unit, which was part of the S&T remains with DBERR. This is good for the hydro industry because microgeneration is handled by this unit and the BHA has recently opened discussions with it, which include problems with ROC's v the Low Carbon Building Programme grants, conflicts with State Aid, and the development of a micro hydro "roadmap". The Cabinet Office's unit for better regulation is now part of DBERR, which also keeps open our route to solutions when we are working on regulatory issues. DBERR will continue to be responsible for energy policy.

As far as the BHA is concerned, there is no immediate change to the personnel with whom we work with respect to energy, regulation, microgeneration and trade promotion issues. UK Trade & Investment, the Government's overseas trade service, also remains unchanged but will be enhanced by personnel from the Cabinet Office.

David Williams, CEO, BHA



Restoration of Hydro Plant in Wales Teaches Children about the Importance of Water

The Alwen hydro scheme near Conwy, North Wales, has recently been brought back to life in a two year long re-commissioning project run by engineers from Dulas Ltd, a renewable energy company based in Machynlleth, Wales. The project will provide energy for the nearby water treatment works and visitor centre that is owned by Dwr Cymru, and run by United Utilities Operational Services (Wales).

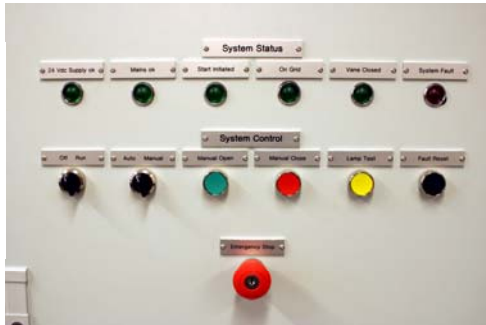
Originally built in 1920 to supply water to Birkenhead, the Alwen Reservoir today has a capacity of 60 million m³. A dam, named the Brenig dam was built in the early 1970s to control the flow of water, and to supply water to the surrounding settlements, with a large water treatment facility below the masonry arch gravity dam now the main operation centre, which filters the water before sending it to various towns for consumption. The reservoir not only supplies clean water to the local area, but is also a popular tourist destination, with activities including sailing, walking, water-skiing and cycling. The lake also boasts enviable fisheries, which were used in the World Fly Fishing Championships in 1990.

The visitor centre, located close to the dam, boasts an interactive, walk-through exhibition of the reservoir and its history. The centre also provides stimulating lessons for local children under its Environmental Educational programme, which has just received its 10,000th visitor. The scheme aims to teach children about the importance of water, a relevant and topical subject.

Dwr Cymru Welsh Water's Environment and Education Manager, Jeff Morgan said: "We offer free environmental lessons linked to the National Curriculum, for pupils aged from six to 12 years of age which are supported by well resourced classrooms. Furthermore, our investment in environmental education is helping youngsters to understand the value of water and the vital role it plays in our everyday lives."

The original hydro power scheme at the Reservoir went out of commission in the 1980s due to the abandonment of DC current in modern technologies. Its replacement will now generate AC current, has automatic system operation, and a capacity to generate 30kW of clean energy. The newly installed hydro generator is not only much smaller than the original, but has state of the art remote monitoring facilities which will enable engineers to monitor performance from a distance. The plant is expected to produce up to 170MWh of electricity annually, enough to supply all the electricity needs of the nearby powerhouse which sends clean water back to homes in the area.

State of the art Dulas Hydro Control System with remote Monitoring



Alwen

The technical bit...

Dulas Ltd are fast becoming known as one of the UK's leading hydro installers, and are already well known throughout the industry for troubleshooting and refurbishment of underperforming plants. The scope of the contract work for the Alwen hydro project included pipe removal of the old turbine and the specification, installation and commissioning of new electro-mechanical equipment, pipe work, actuated valves and a new PLC based control system. Some minor civil modifications were also necessary. Jonathan Cox, Dulas' hydro engineer said, "The main requirement of the scheme development was that the compensation flow should be guaranteed at all times whether or not the turbine was operating. This meant that controls on discharges into the turbine and bypassing the turbine needed to be fully automated. Automation was achieved by actuation of existing valves and the installation of a new valve equipped with a 'failsafe' actuator."

A second requirement was that the system needed to be completely robust and engineered within a tight financial budget. This was achieved by the use of a reliable, well engineered crossflow turbine to guarantee longevity in service, and Dulas' PLC based control system which has been refined and improved over many years.

A third requirement was that the control equipment needed to be integrated onto the water treatment works telemetry system and central control. This is because the power house is more than half a kilometre from the water treatment works buildings. From the Bronze Age, when the area was used as a large ritual site, to the medieval period when the land was considered a valuable farming area, the region around Llyn Brenig has always been of importance.

For more information or to speak to the project manager, please contact Katy Tuxworth on 01654 705043 or email Katy.tuxworth@dulas.org.uk.

DULAS Ltd.



Brenig Dam



Old Turbine



New Turbine

Brignall Mill Micro-Hydro Project

Derwent Hydro have recently completed the installation of a micro hydro project at Brignall Mill. It is a low head installation and is unusual in that there is no weir, the head is developed over some 150 m of river that falls 3.1m around the property.

Flow in the River is very inconsistent with its level prone to change frequently and rapidly, and although the mean flow at this point is more than 2 cumec, it was decided to opt for a minimally obtrusive system that would satisfy the mill's demands for most of the year.

Water is captured in a concrete inlet chamber built at the side of the river; it passes through a 10mm bar screen and enters a 450mm pipe. The pipeline is some 130m long and feeds directly into a guide vane regulated propeller turbine designed and built by Derwent Hydro. The turbine drives an induction generator via a v belt, and the system is controlled by an SCS 'Hydro Generation Pack'. The system runs smoothly and effectively, producing 2.9 kW from 170 l/s on a net head of 2.7m.

You have the opportunity of seeing this neat little system, as the Mill provides holiday accommodation (www.brignallmill.co.uk) you will get a warm welcome from the owner!

John Needle Derwent



Inlet



Turbine

The Energy Markets Bill

The Energy Markets, Carbon Reduction and Warm Homes Bill, a Private Members' bill promoted by Mr Alan Simpson M,P will require local authorities to draw up a sustainable energy plan that aims to meet or exceed any climate change or fuel poverty targets set by the Government. The Bill will:

1. Amend the duties of the Gas and Electricity Markets Authority to encourage reductions in household energy consumption through the promotion of energy service companies
2. Remove regulatory restrictions limiting the size of local distribution networks.
3. Introduce a Citizen's Energy Allowance. It would be a supply licence condition and would be fixed at the energy supply company's lowest tariff. It would ensure that people on the lowest incomes would not pay high rates for essential supply and provides an incentive for other consumers to reduce consumption. The intended outcome is for an equitable and environmental charging regime to contribute to the climate change and fuel poverty targets.
4. Give the Secretary of State the power to set preferential buy-back prices for locally generated electricity from renewable sources.

If enacted, the Bill will make useful additions to the legal and regulatory framework promoting and encouraging the use of renewable energy.

Adrian Abbot, Policy & Consultations Manager, BHA

BHA Welcomes the Climate Change Bill

The BHA has welcomed proposals in the Climate Change Bill for legally binding targets for reducing carbon dioxide emissions by 26-32% by 2020 and 60% by 2050. We also welcomed proposals to require Government to report each year on progress towards each five-year carbon budget, on current and predicted impacts of climate change, and plans to establish the Committee on Climate Change to provide independent advice and guidance to government. It is the BHA's view that it would help policy making and the setting of targets for sources of carbon emissions to be identified by sector. The Bill should be consistent with other policy commitments, especially the Energy White Paper:

- That by 2020 the general level of energy efficiency of residential accommodation has been increased by at least 20% compared with the general level of energy efficiency in 2010
- By the end of 2010 the general level of energy usage in the commercial and public services sectors has reduced by at least 10% compared with 2005 and by the end of 2020 by at least 10% compared with the 2010.
- 10% of electricity shall be generated from renewable sources by 2010 and 20% by 2020.
- 10GW of combined heat and power should be generated by 2010.

Adrian Abbott, Policy & Consultations Manager, BHA



Hydro 2007 - Granada



Don't forget to book your place on the UK pavilion at Hydro 2007 - the annual international hydropower conference and exhibition, this year being held in Granada, Spain (15-17 October 2007).

This important annual international conference and exhibition will be held in the Congress Centre in Granada, Andalucia. Following the success of previous years, the BHA is organising a UK pavilion at the exhibition to provide a high profile platform for UK companies to showcase their products, services and expertise. Over 750 delegates from more than 70 countries are expected to attend, providing excellent networking opportunities with customers from virtually all nations with active water resources development programmes. The Congress Centre boasts a superb exhibition space directly adjacent to the conference sessions, where all the lunches and refreshment breaks will be held. Numerous hotels (from budget through to luxury) are available within walking distance of the Centre, and direct flights are available to Granada from most UK international airports – shuttle buses will also be provided from Malaga airport.



The BHA has organised a UK pavilion at this event for the last six years (each year in a different European location), taking with us several UK companies, all of which have benefited from the exposure in an international forum and many of which have returned with us on a regular basis. Most of these companies have successfully generated quality business from leads at these events and are securing (or have already secured!) firm contracts. As any company is aware, exhibitions are an important part of doing business, particularly when seeking to enter overseas markets. In one place over the course of a few days a company can market its product/service range, meet potential partners or agents, discuss developments in the industry, check out the opposition and see the latest products being launched on the market.

We have also been successful in previous years in gaining support from UK Trade & Investment (UKTI) and DTI for both the UK pavilion and for holding a seminar alongside the conference programme in order to promote the UK hydro industry, where participating companies get the chance to promote themselves directly to an international audience. We are accredited to UKTI's Trade Assistance Programme, which provides grants for UK SMEs at overseas exhibitions (dependent on certain criteria). We are currently awaiting final confirmation from DTI and UKTI regarding funding support for the UK pavilion at Hydro 2007 and hope to hear very soon.

The cost of participating on the UK stand will be less expensive than taking an individual stand (including reduced delegate fees) and participants will benefit from a higher profile at the event - and all the usual organisational headaches associated with attending an international event will be taken away from you (that's our job!). In addition to these benefits, if your company qualifies as an SME (UKTI criteria - see attached T&Cs), we can also offer you a grant of up to £1,800 to go towards your contribution to the stand costs! To find out if you qualify for this grant (with no obligation), contact the BHA as soon as possible – please note the deadline for TAP applications is at the end of July!

We also plan to hold a seminar as a separate side-event (off-stand) which will form part of the main conference programme on Tuesday 16th October, in which you can participate. This will be entitled "Working on the (Supply) Chain Gang", which will highlight to delegates the UK's vast expertise and experience and our ability to continue building on our strong worldwide presence by forming partnerships and collaborations. More details will follow in due course.

A good trade fair is both an international market place and an efficient networking forum and we do hope that you are able to join us at this important international hydropower event. For more details or to register your interest, please contact the BHA.

Ellan Parry, Operations & Marketing Manager, BHA

1st Very Low Head Turbine is Commissioned

On March 19th 2007, the first Very Low Head (VHL) turbine delivered its first kW to the public network on the MJ2 Millau demonstration site (South of France). This marks the end of the first R&D stage of the project and the starting point of the industrialisation of the VHL concept.

During the first quarter of 2006, the detailed design that followed the small scale model tests was the first step towards the manufacturing of the first Turbo Generator. The manufacturing process itself took more than 10 months due to the wide extent of innovation that the VHL incorporates.

By the beginning of March, the first elements of the turbine and generator were delivered and assembled on site before the machine could be craned into its working location. Once in its location, the VHL was connected to the electric equipment and the auxiliaries and commissioning test started.

Since then, full output has been reached, over speed and runaway speed have been successfully tested and the control equipment and the frequency converter have been tested and commissioned.

The VHL has been working in industrial mode for more than 2 months now. It is smooth and silent, no vibration can be felt. From the 19th April until the 24th April, the first fish-friendliness tests were performed with encouraging results. During the last six months, almost 100 people have visited the MJ2 demonstration site.



Millau Demonstration Site

Meanwhile, the MJ2 international sales network has been expanding. Sales representatives have been appointed in Germany, Spain and Italy. MJ2 have already secured orders for 3 VLH to be delivered in 2008, and they will probably close more contracts before the end of the year.

New features will be developed and the return on experience of the first VHL will be integrated in the detailed design of the next machines to be built. MJ2 are now entering the industrialisation challenges, cost level, reliability, integration into big rivers, withdrawing capacity are among the next targets.

Source: MJ2 Technologies Sarl.

WORLD BANK POWERS HYDRO & OTHER RENEWABLE ENERGY IN SRI LANKA

The World Bank has approved additional financing of US\$40 million credit to strengthen the Government of Sri Lanka's efforts to bring electricity to remote rural communities and promote private sector power generation from renewable energy sources in urban areas.

Expressing confidence that the additional financing will scale up the project, Naoko Ishii, World Bank Country Director said "Over the past four years, the Renewable Energy for Rural Development (RERED) Project has clearly shown that alternative environment friendly systems can be a viable and effective alternative for remote and rural areas."

The initial RERED project brought about an increase in power generation capacity with active private sector involvement and improved energy access in rural areas. Its impact was seen in the socioeconomic developments reflected in the creation of income-generation activities leading to raised earning levels in villages where the project was active.

"Sri Lanka has made strong progress in terms of promoting private investments in renewable and rural energy," said .Mudassar Imran, Senior Energy Economist and Task Leader for the project. "The additional financing for this project will facilitate the development of the renewable energy sector thereby contributing to the government's renewable energy development goals."

Specifically, the additional financing will aim to:

- (i) increase the grid-connected capacity by a further 50 MW through renewable energy technologies by the private sector;
- (ii) provide energy access to 60,000 additional households in rural areas through off-grid electricity services; and
- (iii) provide access to an additional 500 rural micro- and small-scale enterprises.

The primary goal of the first project was to bring electricity to remote communities and individual households through village-led electricity societies and solar energy dealers. The productive use of electricity resulted in an increase of non-farm incomes of rural households and improved the delivery of social services such as health and education through customized electricity provisions.

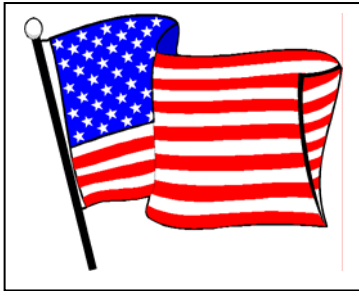
A valuable gain was the strengthening of the generation supply of the national grid through the support given by private sector-owned mini-hydro, and other renewable energy projects that feed into the grid.

The original project components will remain the same and include refinancing support for grid-connected renewable energy, investment in solar power technology (photovoltaic) and further commercialization of village hydro and other community-based independent grid systems. Technical assistance to build capacity to enable communities to realize both direct and indirect benefits of electrification remains a vital part of the project.

The credit is provided by the International Development Association (IDA), the World Bank's concessionary lending arm, and has 20 years to maturity and a 10-year grace period. For more information about the World Bank's work in Sri Lanka, please visit <http://www.worldbank.org/lk>. Contacts: In Colombo: Chulie De Silva (94 11) 5561323 cdsilva@worldbank.org In Washington: Benjamin Crow (202) 473 5105 bcrow@worldbank.org

Source: UK Trade & Investment

Across the pond



FERC Re-licenses Three Hydroelectric Dams in New Hampshire, USA

Public Service of New Hampshire (PSNH) has received a new license for the continued operation of three hydroelectric facilities it owns in New Hampshire along the Merrimack River between Manchester and Concord.

The new 40-year license, effective May 1, 2007, was issued by the Federal Energy Regulatory Commission (FERC), and contains a number of environmental requirements aimed at protecting fish and wildlife resources and water quality. Collectively, the three facilities are capable of generating 30 megawatts of electrical power.

"Hydropower is a clean renewable energy resource which helps offset the use of fossil fuels," noted John MacDonald, PSNH vice president, energy delivery and generation. "PSNH is committed to increasing its supply of renewable energy and this new FERC license is testimony to the fact that we have safely and effectively operated these three facilities for many decades."

FERC's license for PSNH's "Merrimack River Project" includes Amoskeag Station in Manchester, Hooksett Station in Hooksett and Garvins Falls Station in Bow. Some of the requirements it contains -- which were agreed to by PSNH as well as federal, state and local government agencies, environmental organizations and private citizens -- include Run-of-River Operation and Bypass Reach Flows to enhance the aquatic habitat; Fish Passageways to trigger the return of a certain number of shad and river herring; 105 acres of PSNH-owned land within the Project boundary has been designated for the protection of eagle habitat; and a recreation plan including canoe portage improvements will be developed within six months of the license issuance.

PSNH has operated the three dams under a series of FERC license extensions since the previous 25-year license expired on December 31, 2005

Source: Renewable energy access 28 May 2007

\$557,134 Grant from CCEF Approved for Hydro Electric Turbine Demonstration at Kirby Mill in Mansfield

The Connecticut Clean Energy Fund (CCEF), a ratepayer fund administered by Connecticut Innovations Inc. (CI), today announced that the Connecticut Clean Energy Investment Committee has approved a loan of \$557,134 to help fund the demonstration of a new unique 500-kilowatt hydro electric turbine system, consisting of five micro hydro turbine units, at Kirby Mill in Mansfield, Connecticut. The developer of the technology is Windham Automated Machines, Inc. (WAM), an equipment engineering and manufacturing company located in the historic Kirby Mill within Mansfield Hollow State Park. CCEF's funding will be provided through its Operational Demonstration Program.

The WAM turbine is a state-of-the-art hydro electric system that will offer energy developers a number of attractive features. Its claims include that it is highly efficient; can operate under more diverse river flow conditions than other turbines; can be inexpensively produced, installed, operated and maintained in "run-of-the-river, low head" conditions; and is modular and scalable in design. Additionally, its design is environmentally friendly, utilizing a "fish friendly" propeller and dispensing with hydraulic systems and oil filled gear boxes, which can pose pollution problems in other hydro electric turbine systems. In short, the WAM turbine should enable energy developers to efficiently and cost-effectively harness a river's renewable energy while remaining environmentally friendly.

"We look forward to seeing how this new state-of-the-art hydro electric turbine will perform in a real-world setting" said Lise Dondy, president of CCEF. "It is through our support of innovative technology like this one that CCEF is able to foster the development of new clean energy technologies that will help create non-fossil fuel based energy for the future." Dondy added, "With a potential of nearly 4,000 small and micro hydro sites in the New England area, hydro is a potentially large renewable energy resource in the region - one that has remained relatively untapped."

Sam Shifrin, WAM president of engineering, noted that "by using modern high-tech engineering, design and evaluation software, we were able to combine technologies in ways that had not yet been done. The participation of CCEF will allow us to finalize development of this equipment which will make it economically feasible to potentially unleash enough renewable, clean energy to power nearly 800,000 homes in New England alone."

Chris Ramm, WAM president of operations, said, "To have a product that provides real societal benefits and, at the same time, creates opportunities for high-tech, legitimate manufacturing positions here in the State of Connecticut is very, very exciting."

Source: Connecticut Clean Energy Fund 14th May 2007



MWH Awarded Three Ohio Hydroelectric Projects

MWH, a global provider of environmental engineering, construction and strategic consulting services based in Broomfield, Colo., has been selected by American Municipal Power-Ohio (AMP-Ohio) to design and construct three new hydroelectric projects on the Ohio River.

All three facilities will be located at existing locks and dams to minimize environmental impact, and will have a combined generation capacity of 191 megawatts (MW)—adding significantly to the state's renewable energy generation portfolio. MWH designed AMP-Ohio's Belleville Hydroelectric Plant, which produces 42 MW of energy and has been in operation since 1999.

"Our past work with MWH on the Belleville Hydroelectric Plant makes us confident that MWH is an excellent company to oversee these three projects. They will help protect the interests of AMP-Ohio and ensure that these facilities are well engineered, safe and efficient," said Marc Gerken, PE, president and CEO of AMP-Ohio.

The first project will be located on the West Virginia shore at the Willow Island locks and dam, approximately 42 miles upstream from the Belleville Plant. New facilities will include a two-unit powerhouse with an estimated generation capacity of 35 MW. This plant will produce approximately 195,000 megawatt-hours (MWh) annually. The second project will be located at Cannelton locks and dam near Cannelton, Indiana.

The largest of the three projects, Cannelton will have a capacity of 84 MW. This three-unit plant is expected to generate an average of 390,000 MWh annually. The third project will be located on the Kentucky shore at the existing Smithland locks and dam in Livingston County, Ky. Projected to be a three-unit, 72 MW plant, the Smithland project will generate an average of 340,000 MWh annually.



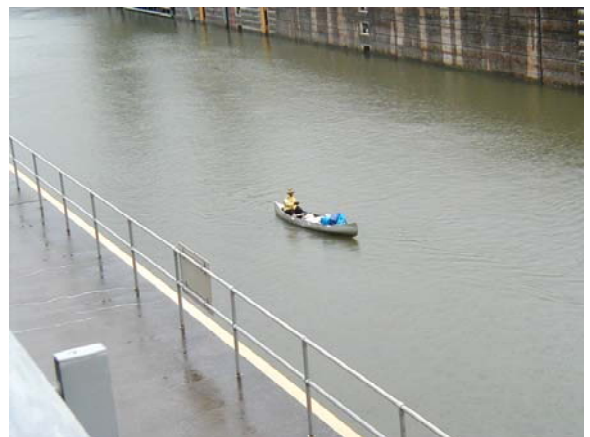
Cannelton Locks

MWH has been providing engineering services to the dam and hydropower sector since 1920 and is currently working on numerous dam and hydropower projects throughout North and South America, Europe, Asia and Africa. MWH has played a key role in some of the largest dam and hydropower projects in the world, including the Three Gorges Dam in China, Ghazi Barotha Hydroelectric Scheme in Pakistan, Mohale Dam in Lesotho, Tekeze Dam in Ethiopia, Caruachi Hydroelectric Project in Venezuela and Karahnjukar Hydroelectric Project in Iceland.

Source: Renewable energy access 5th June 2007



Willow Island locks and dam



Smithland locks and dam

GE Invests \$112 M in Run-of-River Hydroelectric Project

GE Energy Financial Services, a unit of General Electric, will make its first equity investment in Canada and diversify its renewable energy portfolio by investing in the construction of a 196-megawatt run-of-river hydroelectric project in British Columbia, Canada, being developed by Plutonic Power Corporation.

The energy giant, through a Canadian affiliate, has agreed—subject to closing conditions—to invest up to CDN \$112 million to acquire a 49 percent equity and 60 percent economic interest in Plutonic's East Toba River and Montrose Creek project, 118 miles northwest of Vancouver at the headwaters of the Toba Inlet.

The project includes a 90-mile long transmission line for interconnection to the power grid. In addition to its equity commitment, GE Energy Financial Services is co-leading, with Manulife Financial, a CDN \$466 million senior secured debt offering to finance the project.

The transaction, plans for which were first announced last August, is expected to close next month, with project construction scheduled to start this summer.

Unlike traditional hydroelectric facilities, run-of-river projects do not require damming and storage of water. Instead, some of the waterflow is diverted from the river and sent into a pipe called a penstock that feeds the water downhill to a generating station. The water leaves the generating station and is returned to the river.

"Run-of-river hydroelectric power is one of the most environmentally safe and commercially viable sources of electricity generation," said Mark Tonner, Managing Director at GE Energy Financial Services in Canada. "In the spirit of GE's ecomagination initiative, our investment diversifies our renewable energy portfolio, helps Plutonic achieve its goal of making British Columbia's largest independent investment in renewable energy projects and helps BC Hydro remain one of North America's top energy companies in sustainability performance."

The project, which will produce electrical energy sufficient to power an estimated 75,000 homes annually, helps the province of British Columbia ensure that clean or renewable electricity generation continues to account for at least 90 percent of total generation.

Crown-owned British Columbia Hydro and Power Authority (BC Hydro), serving more than 1.6 million customers in an area containing more than 94 percent of the province's population, has committed to purchase the project's output for 35 years.

In addition to investing in the hydroelectric facility, GE will make a three and a-half year CDN \$30 million credit facility available to Plutonic to increase the capacity of a 230-kilovolt transmission line to be built as part of the project. This investment would pave the way for Plutonic to be able to self-finance the construction of three additional Toba Valley projects with generation capacity of 116 megawatts.

In return for this credit facility, Plutonic will grant GE the right to negotiate to finance up to an additional 200 megawatts of other hydroelectric power projects in BC, and issue to GE 650,000 two-year common share purchase warrants with an exercise price to be determined upon closing.

"Since first transacting with GE Energy Financial Services in August of 2006, we have been able to solidify a financing plan for over 500 megawatts of our generation capacity. This financial security allows Plutonic to focus on permitting and development of its growth pipeline, especially as concerns our social license to operate," stated Donald McInnes, founder, president and CEO of Plutonic Power.



Since January, Plutonic has obtained a British Columbia Environmental Assessment Certificate, a positive project decision under the Canadian Environmental Assessment Act, and successfully concluded Impact and Benefits Agreements with the Klahoose and Sliammon First Nations

Final significant conditions to be concluded prior to the commencement of construction include signing a definitive shareholders' agreement, closing the debt facility, executing an interconnection agreement with British Columbia Transmission Corporation and concluding a fixed-price construction agreement with Peter Kiewit Sons', Inc.-all of which are expected to close in June. The project is expected to become operational in 2010.

Source: Renewable Energy Access 30May 2007



CURRENT CONSULTATIONS

Full details of the following consultations have been sent to you by separate email. Should you wish to receive these details again, please contact the BHA. Responses to be sent to info@british-hydro.org

Tawe, Loughor and Gower CAMS

The Environment Agency Wales has published the Statement of Responses to the consultation on the Tawe, Loughor and Gower CAMS. There were 13 respondents (including the BHA). In answering our concerns on licensing, the Agency said: *"Non-consumptive abstraction will be considered throughout the CAMS area. However, applications will be subject to the Environment Agency's license determination process (which covers time limiting of licenses) and the application of our Hydropower policy"*

Torrige and Hartland Streams CAMS

The Environment Agency (EA) has published the Torrige and Hartland Streams CAMS covering the catchment of the rivers Torrige, Okement, Lew, Waldon and Duntz as well as the small coastal streams; the Abbey river, Hartland and Welcombe streams. It includes Lundy Island. The river Torrige, 77km long, rises near the coast at Baxworthy Cross and reaches the sea at Bideford. Largely rural, it includes coastal towns and areas that are popular with tourists (Bideford, Barnstaple, Brauton, Insetow and Westward Ho!). Waterpower accounts for 36% of abstractions.

The closing date for responses is 30th July 2007. Copies of the consultation document are available from the EA, Exminster House, Exminster, Devon EX, Coverdale 6 8AS. Tel: 0808 506 506 04 e-mail: cams.devon@environment-agency.gov.uk or it can be viewed on line at: www.environment-agency.gov.uk/cams.

We shall prepare a collective response. If you have comments or views you would like us to include in our response please submit them to the Secretariat by Friday 20th July.

Darent and Cray CAMS

The Environment Agency has published the Darent and Cray CAMS. The Darent & Cray CAMS covers the river Darent from its source on the North Downs. The Darent flows north and is joined by the river Cray before winding through the Dartford and Crayford marshes before entering the river Thames. It will be revisited during 2011-13. Copies are available from the Water Resources Team, Environment Agency, Endeavour Park, London Road, Addington, West Malling, Kent ME19 55H; Tel; 01732 2231110; e-mail: cams.kent@environment-agency.gov.uk.

Tees CAMS

The Environment Agency (EA) has published the Tees CAMS covering the catchment of the river Tees which rises in the Pennine hills and flows east/southeast for 160km to the North Sea just northeast of Middlesborough. There are two major waterfalls in the upper reaches of the river Tees at Cauldron Snout and High Force. The Tees is joined by the river Skerne at Darlington and the river Leven above Stockton-on-Tees. The Tees is an important water supply river. The river is supplemented by a compensation flow from Cow Green reservoir in dry periods and releases from Kielder reservoir in Northumberland can also be used to main flow if necessary.

The closing date for responses is 24th August 2007. The consultation document can be viewed on line at: www.environment-agency.gov.uk/cams.

We intend to prepare a collective response. If you have comments or views you would like us to include in our response please submit them to the Secretariat by Friday 27th July.



New Members

CGP Southwest has joined as a correspondent member. CGP is a new company that has been formed to find and develop hydro sites.

Carron Energy Ltd has joined as a principle company member. Carron Energy is a private power company which aims to build an integrated multi-asset European energy business.





Member Offers & Discounts



Financial Opportunity for BHA members?...

VENTUS PLANS TO INVEST IN INDEPENDENT HYDRO

The Ventus Group of Funds (managed by Climate Change Capital) has raised over £37m to invest in UK independent renewable energy projects. It already has several investments under management and is seeking to broaden its investment portfolio by partnering with owners and operators of hydro schemes in the UK.

Their approach is to co-invest alongside project developers and asset owners, providing not only the equity capital to develop projects, but also the technical and financial structuring support needed to bring such schemes to fruition.

They would like to talk to BHA members and owners of existing operating hydro assets about the potential for co-investment in their schemes – no matter how big or small.

Ventus advise that a co-investment with them can release considerable cash benefit for existing owners to deploy in further business development activities, without having to give up control of their existing generating assets.

Ventus also welcomes existing owners willing to remain in the operational front line, managing sites on a day-to-day basis, just as they always have.

If you would like to discuss the opportunities for a co-investment by Ventus or for further information please contact: Ashley Turner at Climate Change Capital tel: 020 7290 7040 email : aturner@c-c-capital.com Web: www.climatechangecapital.com

The Ventus funds are managed by Climate Change Capital, which is authorised and regulated by the Financial Services Authority. In seeking to invest the capital of the funds in projects, CCC is not issuing, promulgating or seeking to provide investment advice.

Brand new unused 40 kW generator for sale

1 Three-phase motor with squirrel cage rotor, totally enclosed, fan cooled, isolation class F, utilized as per class B, type of operation: Generator:

Rated Power:	40 kW
Rated speed:	1015 r.p.m.
Voltage:	3 x 400 V
Frequency:	50 C
Type of construction:	V1
Type of protection:	IP 55
Brand:	Flender Loher
Type:	AGGA-250ME-06T
Engine No.:	3335331
Price:	£1,200

For more details contact: Anthony Battersby, FBA
Health Systems Analysts Tel: +44 (0)1373-830322

THE INTERNATIONAL JOURNAL ON HYDROPOWER & DAMS

Hydropower & Dams subscription. Hydropower & Dams are offering a discount on subscriptions to the industry journal International Hydropower & Dams for BHA members. The discounted annual rate is £80 (full price £105) and the discounted 3-year subscription rate is £200 (full price £263). BHA members wishing to take this offer up just need to mark their subscription form "BHA Member" and, once their subscriptions department has confirmed BHA membership with us, they will receive the journal at the discounted rate.

TRADE LEADS



Philippines

- Aboitiz Power Corp. has set aside Php 8 billion until next year for capital requirements and expansion projects of its subsidiaries. One of these is the planned construction of the Sibulan facility, consisting of two mini-hydroelectric plants in Mindanao with a combined capacity of 42.5 megawatts (MW). This project is expected to cost Php 5 billion and will be completed in 2009. Other projects to receive funding are the Php 4.2 billion Tamugan-Suawan hydroelectric power plants with a combined capacity of 30.5 (MW), and which are seen to be completed in 2010.
- First Gen Corp. has set aside US\$1.375 Billion (est. £14.627M) for the expansion of its existing projects, and for possible projects abroad. The budget is primarily for the 550 MW San Gabriel Gas Plant, 100 MW Panay clean coal plant, 400 MW Pagbilao and Pantabangan - Masiway greenfield mini-hydro projects, and possible joint ventures overseas.
- Aboitiz Power Corp. is planning to bid for three big hydropower plants, which are due for privatisation by the Power Sector Assets and Liabilities Management (PSALM) Corp. Two of these are located in the 175-megawatt (MW) Ambuklao-Binga Hydropower Complex, the capacity of which the firm will expand if acquired. Another interest is the 246 MW Angat Hydropower Plant. Aboitiz is focusing more on hydropower facilities, and has earlier won the bid for the 360-MW Magat hydro power plant, together with its partner SN power of Norway.

Contact: Mr Fidel Ventura British Embassy Manila, 17th Floor LV Locsin Building, 6752 Ayala Avenue, Makati City, Philippines Telephone: +63 2 580 8305 Fax: +63 2 815 6233 Mail: Fidel.Ventura@fco.gov.uk.

China - Proposed Dagushan Hydropower Project

Funding Agency - ADB (Asian Development Bank)

People's Republic of China (PRC) applied for loans from the Asian Development Bank (ADB), for the Gansu Heihe Rural Hydropower Development Investment Program [the Investment Program as a multitranche financing facility (MFF)] for the development of Erlongshan and Dagushan hydropower projects on the Heihe river cascade hydropower development scheme in Gansu Province. The Investment Program has two tranches for the development of each of these two hydropower projects. The first tranche under the investment program was approved on 18 December 2006 for the Erlongshan hydropower project, which is being implemented now. The second tranche to finance the 60 megawatt (MW) Dagushan hydropower project is expected to be approved later in the year. Advanced contracting has been agreed for Dagushan hydropower project. Procurement for Dagushan hydropower project (the Project) to be financed by ADB will be carried out in accordance with ADB's Procurement Guidelines 2006 as amended from time to time. The indicative list of procurement packages is as listed below:

1. Headrace tunnel (2 civil works packages)
2. Surgeshaft and penstocks (civil work package)
3. Powerhouse construction (civil works package)
4. Hydrogenerator sets and auxiliaries (equipment)
5. Main and station services transformers (equipment)
6. Power station auxiliary equipment (3 equipment packages)
7. Powerhouse crane (equipment package)
8. environment protection (2 works packages)
9. Implementation supervision consulting services

International competitive bidding (ICB) will be used for all power station main and auxiliary equipment (total 6 packages for a total of \$5.66 million). National competitive bidding (NCB) will be used for civil works packages (6 packages at an estimated cost of 22.14 million). The consultants to provide the consulting services related to the supervision of the Project implementation at an estimated cost of \$200,000 will be carried out using the quality-and-cost-based selection (QCBS). The procurement agency for the Project is being recruited. The contact details of the Procurement Agency as well as the specific procurement notices for all ICB packages will be posted on ADB website as well as www.chinabidding.com. All NCB packages will be advertised on www.chinabidding.com

Interested suppliers and contractors from ADB's member countries who wish to obtain additional information may contact: Mr. Zhu Xingjie, General Manager and President, Heihe Hydropower Development Company, Qingnian Dongjie, Shixi, Zhangye 730000, Gansu Province, PRC, Fax: +86-936- 8225763, email: danielpu@163.com; and zhouxuan616@163.com

Continued



TRADE LEADS

Sri Lanka – Turgo Turbines Required

Requirement for two turgo turbines of 750kW each (total capacity 1.5MW). Contact: Fazal Izzadeen, Zamani Enterprises, No 21/7 Henricus Avenue, Sunethradevi Road, Kohuwala, Sri Lanka. Tel: 0094 777315497/777266460 Fax: 0094 115544202 email: saif2@slt.net.lk and fazal.izzadeen@gmail.com

Partnerships/Joint Ventures

- Indian client looking for manufacturer of hydro turbines, doors for dams etc for partnership, joint venture or takeover. For details contact: Anand Patil, AP Marketing Services, 18 Mayfield Gardens, Brentwood, Essex CM14 4UJ tel: 01277 233949 email: apmservices@sky.com
- EPC contractor would like partnership/joint venture with manufacturer of turbines and generators for hydro projects having capacities of 2x20MW, 3x65MW, 4x80MW, 8x66.25MW all with Francis turbines with a head range of 40-65m. For details contact: Satish Mandke, Kirloskar Brothers Ltd., Sujay Garden, Mukund Nagar, Pune 411037, India. Tel: 912 0244 02209 fax: 912 0242 62581 email: satishmandke@indiatimes.com

Mexico – Yesca Hydro Project

Mexico's Federal Electricity Commission (CFE) has re-launched an international tender to build the 750MW La Yesca hydro project in Jalisco and Nayarit states. Bid deadline is 31st July 2007 with contracts expected to be signed in September (same month works are due to start). The winner of the bidding process can access a development bank loan to cover project investments. Bid include construction of the dam, work related to it, and the supply and installation of two 375MW hydroelectric units. For more information contact CFE via their website: www.cfe.gob.mx/en/

India - Vishnugad Pipalkoti Hydro Electric

The objectives of this project are to:

- (a) Improve the reliability of India's Northern (Electricity) Grid/Network through the addition of renewable, low-carbon energy; and
 - (b) Improve the effectiveness of Tehri Hydro Development Corporation Ltd. with respect to the preparation and safe implementation of economically, environmentally and socially sustainable hydropower projects.
- Project identification is underway. Environmental Assessment Category A. US\$ 400.0 (IBRD). Consultants will be required.

For more information contact: Mr. Deepak Sarwal, General Manager. Tehri Hydro Development Corporation Ltd., Corporate Planning, Bhagirath Bhawan (Top Terrace) Bhagirathipuram, Tehri (Garhwal) 249001, Uttarakhand, India, Tel: (91-135) 2452-5764, (91-135) 2452-5836, (91-135) 2453-7821, Fax: (91-135) 24545

Forthcoming Events

Great Yorkshire Show. Renewable Energy Zone

10th, 11th & 12th July 2007 – Great Yorkshire Show Ground, Harrogate

For more details contact: Hazel Baker, Education Advisor, Yorkshire Agricultural Society, Great Yorkshire Showground, Harrogate.
HG2 8PW tel: 01423 546283

CLA Game Fair

27th – 29th July 2007 – Harwood House, Yorkshire

For more details contact: Stephen Ingram at Stephen.ingram@cla.org.uk www.gamefair.co.uk

IET - Distributed Generation Systems Game Fair

3rd to 5th September 2007 – Blyth, Northumberland

For more details contact: Elizabeth Jarvis tel: 0141 427 0735 email: ejarvis@theiet.org

The Institute of Economic Affairs – 8th Annual 'The Energy Forum & renewables 2007'

3rd & 4th October 2007 – Le Meridien Piccadilly, London

For more details contact: Laura Duguid tel: 0207 760 8618 email: L.Duguid@marketforce.eu.com

BHA Annual General Meeting & Annual Conference

10th –11th October 2007 – Birnam, Scotland

For details of how to participate, please contact Ellan Parry at the BHA – tel: 01202 880333 or email: info@british-hydro.org

Hydro 2007

15th-17th October in Granada, Spain

UK Pavilion organised by BHA

For details please contact Ellan Parry at the BHA – tel: 01202 880333 or email: info@british-hydro.org

BHA Micro-Hydro Seminar – CORNWALL

November 2007 Cornwall (details to be confirmed)

For details of how to participate, please contact Ellan Parry at the BHA – tel: 01202 880333 or email: info@british-hydro.org

20th World Energy Congress - The Energy Future in an Interdependent World

11th-15th November 2007, Rome

Call for papers and posters open until 31st December 2006

For further information see: www.rome2007.it

BHA Micro-Hydro Seminar – EDINBURGH

8th December 2007 (details to be confirmed)

For details of how to participate, please contact Ellan Parry at the BHA – tel: 01202 880333 or email: info@british-hydro.org

Scottish Green Energy Awards

8th December 2007 – The Royal Museum, Chamber Street Edinburgh

For more details please contact Ellan Parry at the BHA – tel: 01202 880333 or email: info@british-hydro.org



SHOUT about it.....

- Share your successes and experiences with other BHA members in our newsletter.
- BHA are frequently requested to provide pieces for other publications and we would like to promote our members by providing articles produced by you.

So don't forget – if you have any interesting stories, facts or thoughts, please send them to us – with pictures where possible – and we will endeavour to get them published. We can also advertise your job vacancies and future events - info@british-hydro.org

**British Hydropower Association
12, Riverside Park, Station Road,
Wimborne, Dorset BH21 1QU
T: 01202 880333 F: 01202 886609
info@british-hydro.org**

The information contained in this publication is correct to the best of our knowledge. However, we rely on information sources that are outside our control. The BHA is an independent organisation and does not specifically endorse products, services or organisations that are featured or mentioned. The BHA is the trade association representing the interests of all those involved in the UK Hydro Industry. BHA promotes the industry at home and abroad and aims to increase the awareness of its quality and scope in the wider world.