

## Press Release

# Date:20th May 2008Subject:Redesign for Romney Weir hydroelectric scheme

npower renewables has submitted a planning application to The Royal Borough of Windsor and Maidenhead Planning Authority, to seek approval for a revised scheme design for the Romney Weir hydroelectric project.

The scheme would generate around 1.4 million kilowatt hours of clean electricity each year, enough to meet the average annual needs of around 300 households. The project would also contribute towards meeting the Government's targets of achieving 15% of UK electricity needs from renewable energy sources by 2015.

If planning permission is granted, construction of the scheme is likely to take place in 2009, with commencement of operation the same year.

npower renewables received planning permission for a hydroelectric scheme at Romney Weir in 2005, however, due to rising costs the project was put on hold in late 2007. The project has recently received a fresh boost though in the form of a new and exciting technological design.

Wayne Cranstone, Head of Project Delivery at npower renewables, said "We are delighted that the Romney Weir hydro project once again has the potential to become a reality. Recently we have been working with Southeast Power Engineering, who have suggested a new design involving two hydrodynamic 'Archimedes' screw turbines. The installation, which would be capable of generating more clean power than the original design, would be the first of its kind in the South of England."





David DeChambeau of Southeast Power Engineering, said, "Currently, the Archimedes screw pump is used for flood control by the Environment Agency, for moving effluent through sewage treatment plants by water companies and even as a method to safely move live fish to higher ponds and streams at fish farms in the North Western United States.

The development of the Archimedes screw pump as a hydropower generation system is a logical extension of these pumping concepts. Its reverse approach is simple and extremely efficient.

"Instead of pumping water to a higher level, water is allowed to flow in the opposite direction from the high water side of a weir, down to the lower level of the weir pool. The weight of the water flowing down the system slowly rotates the screw, enabling the screw to extract up to 90% of the flowing waters energy in the process. This powerful rotational energy is then converted to completely carbon-free electricity."

The scheme will be developed, and constructed by, npower renewables in association with Southeast Power Engineering. Romney Weir, which is located adjacent to the bank of Romney Island, between Windsor and Eton, is owned and operated by the Environment Agency.

Ian Tomes, Hydropower Manager at the Environment Agency, said, "I am delighted that this project is moving forward again, and that we've been able to help npower renewables and SPE develop a scheme that generates renewable energy on our weir at Romney.

"This project uses 'Archimedes' screw turbines, which have been proven to be more fishfriendly than other turbine designs. As regulator we will continue to ensure that the scheme minimises the impact on the environment and that there is no increased risk of flooding.





"Hydropower schemes will not be suitable for every weir on the River Thames. However, we are we currently identifying a small number of our sites that may be suitable economically and environmentally for development."

Further information about the Romney Weir Hydro Project can be found at <u>www.npower-renewables.com/romneyweir</u>

### Ends

Computer-generated images of the scheme are available from npower renewables via the contacts listed below.

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#### Editor's notes

1. npower renewables is one of the UK's leading renewable energy developers and operators, committed to developing and operating wind farms and hydro plants to produce sustainable and environmentally-friendly electricity. The company operates 16 hydroelectric power schemes and 19 wind farms in the UK, including the country's first major offshore wind farm, North Hoyle. npower renewables is also working with marine energy technology partners to deliver new wave and tidal stream power projects in the UK. Through our existing projects and those in development, we are working in close partnership with communities and companies throughout the UK. As Government policy drives the UK towards a target of supplying 10% of electricity from renewables by 2010, and 15% by 2015, we will be at the forefront of realising this aim.

npower renewables is a fully owned subsidiary of RWE Innogy, and sister company to RWE npower, a leading integrated UK energy company, whose activities include the co-firing of biomass and the implementation of a major energy efficiency programme.

For further information about npower renewables and RWE Innogy visit <u>www.npower-renewables.com</u> and <u>www.rweinnogy.com</u> For further information about RWE npower visit <u>www.rwenpower.com</u>

2. Southeast Power Engineering Ltd is a UK based hydropower development company in partnership with Summit Asset Management, who specialise in creative and cost effective solutions to difficult hydropower challenges. For further information about Southeast Power Engineering call 01932 883877. For further information about Summit Asset Management visit <a href="http://www.summitasset.co.uk">http://www.summitasset.co.uk</a>

3. The Environment Agency is the leading public body for protecting and improving the environment in England and Wales. It is the Environment Agency's job to look after the environment and make it a better place - now, and for future generations. The Agency's remit includes protecting people from flood, working with industry to protect the environment and human health, looking after wildlife, helping people get the most out of their environment, including boaters and anglers, influencing and working with Government, industry and local authorities to make the environment a priority. For more information visit www.environment-agency.gov.uk

