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# Western Regional Group

## evening lecture

## Mine Water Temperatures in the South Wales Coalfield: A Potential Source of Low-Carbon Heating Energy

David Tucker (WDS Green Energy) & Gareth Farr (BGS)

21 April 2015, 6:30pm

Abandoned mine workings within the South Wales Coalfield are often flooded with groundwater that has the potential to be a major energy source for heat pumps. Baseline monitoring of a network of mine water discharges from abandoned mines has been undertaken by the British Geological Survey proving temperatures up to 19°C at the point of discharge. Calculations by Cardiff University have shown there is some 65MW's of heat that could be exploited to meet demands from homes, offices and public buildings across South Wales.



To demonstrate the use of this valuable energy resource WDS Green Energy Ltd have constructed a combined domestic and commercial heat pump project at Crynant near Neath, utilising water in the underlying old workings of nearby Cefn Coed Colliery. This project is the first of its kind in the UK and has been undertaken with technical support from the Seren Project Team at Cardiff

University, the Coal Authority and Natural Resources Wales, and as heat pumps are one of the renewable energy systems approved by the UK Government under their carbon saving programme, the client is eligible for Renewable Heat Incentive (RHI) payments for 20 years.

The talk will cover the monitoring of mine water in south Wales, design of heat pumps and details on the 'Crynant' project site.

### Forthcoming Talks

The WRG is constantly on the lookout for fascinating talks. If you would like to present, know someone who is willing or know of a topic that would be of interest please contact the WRG committee (details below) and we will try our very best to accommodate your requests.

### Venue

Atkins, The Hub (Ground Floor), 500 Park Avenue, Aztec West, Almondsbury, Bristol, BS32 4RZ.

For directions see: <http://goo.gl/maps/8akUi>

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