

# Shell London Lecture Series - Geology in the Age of Man

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Geological Society of London

## Geological aspects of renewable energy



SPEAKER: *Bruce Levell (Shell)*

Moving to a lower carbon energy system and, over time, displacing fossil fuels with renewable energy will involve new challenges for geologists.

In this talk we will explore these challenges. Below ground geothermal energy is an obvious example: High grade for converting to power, low grade for space heating and shallow for seasonal storage and heat pumping. Underground energy storage, for example hydrogen in salt caverns, may be a more effective and flexible solution than batteries to the challenges of matching renewables' intermittent supply with demand.

Less obviously the siting of renewable energy projects from hydro electric power or storage to wind farms, both onshore and offshore, is based fundamentally on conditions created by geology.

Last but not least, the new resources required to manufacture the energy conversion equipment needed to supply renewable energy on a global scale will place new demands across the periodic table for resources which already is beginning to constrain and shape the commercial solutions.

Date: *Wednesday 14 November 2012*

Timings: *This lecture will be given at 3pm and 6pm on this day (with tea/coffee served for half an hour before each), so please let us know, when applying for tickets, which talk you would like to attend.*

Venue: *The Geological Society of London, Burlington House*

Entry to this lecture is free to all, but by ticket only. Please call at reception (to your right) or contact the Society by post, phone, fax or email (see below).



For further information, please contact:  
Conference Office, The Geological Society,  
Burlington House, Piccadilly, London W1J 0BG  
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All past lectures can be viewed on our website at [www.geolsoc.org.uk/shelllondonlectures11](http://www.geolsoc.org.uk/shelllondonlectures11)

## 2012 Programme

18 January	<b>Earthquakes and tsunamis in the modern world</b>	<i>James Jackson, University of Cambridge</i>
15 February	<b>Rocks and climate change: How we can stop pulling the carbon trigger</b>	<i>Bryan Lovell, GSL President</i>
28 March	<b>Life at the edge: Sinking deltas</b>	<i>James Syvitski, University of Colorado</i>
18 April	<b>Impacts and Adaptation to Sea-Level Rise</b>	<i>Robert Nicholls, University of Southampton</i>
9 May	<b>Unconventional gas</b>	<i>Melvyn Giles, Shell</i>
27 June	<b>Sustainability of groundwater in a changing world</b>	<i>Paul Younger, Newcastle University</i>
26 September	<b>Volcanoes and man</b>	<i>Kathy Cashman, University of Bristol</i>
10 October	<b>Pollutants and human health in the age of man</b>	<i>Jane Plant, Imperial College London</i>
14 November	<b>Geological aspects of renewable energy</b>	<i>Bruce Levell, Shell</i>
19 December	<b>Incoming: Learning to love the meteorite</b>	<i>Ted Nield, GSL</i>



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