



Surrey Network

Universities of the Third Age

UK ENERGY FUTURES

A Study Day on Friday, 20th April 2018

At The Menuhin Hall, Stoke d'Abernon (map on next page)

Speakers: Graham Hill, Richard Rumble, Robin Allen, John Gallop & Ian Funnell

The UK's energy development plans are at a crucial stage. An expensive nuclear power station at Hinckley Point is under way, but the design has yet to be successfully completed elsewhere. A date has been set to replace petrol/diesel cars by electric vehicles. The usage of 'green energy', primarily wind and solar PV, is increasing rapidly but we need to develop adequate storage facilities to make full use of its potential. The national grid will require extensive restructuring as we move away from a few large power stations to widely distributed solar and wind power generation. Our oil and gas reserves are almost depleted. An alternative source, onshore hydraulic fracturing, 'fracking', that revolutionised the US energy market is under development in the UK. Public protest such as at Leith Hill shows that it is contentious. Nuclear fusion, shown to be feasible by JET, is a truly 'green' energy source. In France ITER, twice the size of JET, is years behind schedule and well over budget. Today we have experts on hydraulic fracturing, fusion power, energy storage, and the national grid to outline the main areas of development and set the scene for discussion on the future of energy generation in the UK.

Programme

- 9.30 Registration
- 10.00 **Introduction;** Graham Hill, U3A member & lately from OU & NPL
- 10.15 **Gas Fracking; a low emission, economic stop gap?** Richard Rumble, U3A member & lately from KBR
- 11.00 Coffee / Tea
- 11.30 **Nuclear Fusion: Power for the future?** Robin Allen, lately from UKAEA
- 12.30 Lunch - Bring your own – Tea / Coffee available
- 1.30 **Energy Storage:** John Gallop, Imperial College & NPL
- 2.15 **Energy Transmission:** Ian Funnell, U3A member
- 3.00 Tea / Coffee
- 3.30 **Panel Discussion**
- 4.00 Departure

Speakers & over page – Graham Hill studied for a PhD in solid state physics at Bristol. He then lectured briefly in Cambridge College of Arts & Technology before joining ERA Technology in Leatherhead. Since retirement from ERA he has worked for the Open University and the NPL at Teddington. He is a Fellow of the Institute of Physics.

Richard Rumble studied mechanical engineering at Imperial College. He had a career spanning 40 years in the oil, gas, LNG and refining industries, first with Bechtel in the USA and then Kellogg Brown and Root (KBR) in the UK. He was managing international projects from the feasibility and conceptual stages to the final engineering, procurement and construction (EPC) phase; both onshore and offshore, with a speciality in modularisation and project finance. Areas included the North Slope of Alaska, Russia, the Caspian, Algeria, the Middle East and Australia. He is a Fellow of the Institution of Mechanical Engineers.

To assure your place send the slip below, as soon as possible, with a cheque for £10 (non-U3A guest £12) payable to 'Surrey U3A Network', to John Kennedy – U3A, 20 Greville Park Road, Ashted, KT21 2QT 01372 273561, surreyU3Astudyday@btinternet.com. Enclose a SAE or your e-mail address for confirmation. Fees are not normally refundable. For our website see the next page.

Energy Study Day

20th April 2018

Please print

Confirm by E-mail or enclosed SAE

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Title First Name Surname Name of U3A

Address

Post Code Telephone E-mail

Do you need disabled parking (disabled drivers only, display badge)? yes

Robin Allen began his working life with GM at Luton and gained his first degree from Birmingham University. After a master's degree in bio-engineering at Surrey, Robin worked on MRI magnets with Oxford Instruments. He has worked at Culham since 1992 in cryogenics and the heating and fuelling of plasmas. He has just retired from CCFE after developing the mechanical engineering of the plasma-heating equipment for the ITER machine and the British fusion research MAST machine. He is a Fellow of the Institution of Mechanical Engineers.

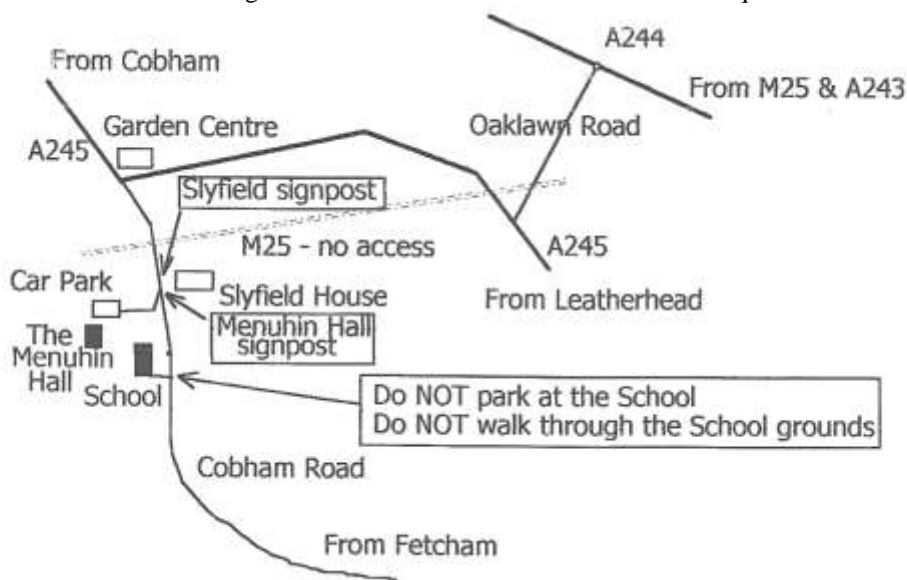
John Gallop joined NPL in 1969 after a DPhil at Oxford University where he worked on a number of high frequency metrology projects and the applications of superconductors. He is a visiting professor at Imperial College and a Fellow of the Institute of Physics.

Ian Funnell studied for a PhD at Birmingham University and then worked for the Central Electricity Generating Board and National Grid. Ian was an Open University Associate Lecturer on sustainable energy courses and is a founder member of Fetcham U3A with a wide role in the U3A Movement, nationally and internationally. He is a Fellow of the Institute of Physics.

The Menuhin Hall

Cobham Road, Stoke d'Abernon, KT11 3QQ
Map ref: TQ 132 579 on Landranger 187, Explorer 146
Telephone 07763 805046 (emergency, on day only)
or Menuhin Hall Office 08700 842020

There is a Garden Centre (01932 862530), about 800 metres to the north of the Menuhin Hall where light lunches are available. Reservations not required.



The Menuhin School was founded in 1963 in London and moved to its present site in 1964. It has about 80 pupils learning to play stringed instruments including piano and is financed, in part, by the DfES. Lord Menuhin was born in New York on 22nd April 1916 and died on 12th March 1999 in Berlin. His parents had come from Russia. His first public concert was in March 1924 and his first in Europe, in Paris, in 1927. His performance of Elgar's Violin Concerto was recorded at the Abbey Road Studios in 1932. The Hall, designed by Mark Foley, was conceived as a memorial to Yehudi and was handed over to the school on 5th August 2005. The official opening was on 7th January 2006. Yehudi is buried near the stone pillar in front of the Hall. Nearby is an oak which he planted on his 80th birthday. The Hall was first used for U3A Study Days on 14th October 2005 when the Steinway grand piano was used as no other was available.

Surrey Network Website - <http://u3asites.org.uk/surreyu3anetwork/> has application forms for study days & other events plus information about the Surrey Network and links to Surrey U3A websites.