

Payne Institute Spring Seminar Series

Dr. William Nuttall, Professor of Energy

The Open University, Milton Keynes, England



Hydrogen from Natural Gas - key to a low carbon future?

1:00-2:00pm | Monday, January 27, 2020

Brown Building 125

As the case for Climate Change mitigation becomes ever more pressing, hydrogen has the potential to play a major role in a low-carbon energy future. Hydrogen can drive the vehicles of tomorrow and also heat homes and supply energy to businesses. Much recent discussion in energy policy circles has considered ways in which greatly expanded electrification can meet the demand for low-carbon mobility and heating. Such narratives center on the widespread use of renewable energy sources with occasionally surplus renewable electricity being used to produce hydrogen, for example by electrolysis. While such developments have a beneficial role to play, this presentation focuses on an alternative paradigm. Professor Nuttall considers a more evolutionary path involving the continued extraction and use of fossil fuels, most notably natural gas, but in ways that greatly reduce greenhouse gas emissions. In this way much established industrial capacity and know how might be transitioned to help deliver the low carbon future that the world so desperately requires.

Professor Nuttall won a Fulbright Scholarship to MIT in 1987 at the start of a PhD in Physics. His PhD under the supervision of Professor Robert J. Birgeneau was awarded in 1993. After post-doctoral work in physics at Keele and Birmingham universities in the UK he moved into science policy work in 1997 with the Institute of Physics based in London. In 2002 he moved to Cambridge University where he launched the MPhil program in Technology Policy as part of the work of the Cambridge-MIT Institute. In 2012 Professor Nuttall moved to the The Open University, but he still has close links to Cambridge University as he is a Fellow of Hughes Hall, a college of the university, and an Affiliated Lecturer to Cambridge Engineering Department. Professor Nuttall is a Colorado School of Mines, Payne Institute Fellow.