

**THE AGE OF  
FOSSIL FUELS IS  
COMING TO AN END.  
GLOBAL WARMING  
FROM THEIR BURNING  
IS UNDENIABLE.  
BUT WHEN WILL  
TOMORROW  
BEGIN?**

**JEFFERY TALLON, VICTORIA UNIVERSITY OF WELLINGTON**

# THE ENERGY REVOLUTION

**AQUARIUM EXHIBITION HALL, MARINE PARADE, NAPIER, TUESDAY, 28 JULY, 7PM**

Will there be a long transition period, with a mish-mash of renewables, while we learn to harness the sun's energy efficiently, as plants have been doing for 3.5 billion years? Is there even enough sunlight striking the Earth to supply the increasing energy demands of 6-9 billion humans? Nuclear energy may be the only realistic alternative for some countries but it's not an option for a nuclear-averse country like New Zealand, with a small population and large land area split in two. Can our renewable energy sources satisfy the extra load of a wholesale conversion to electric vehicles? Or would it be simpler just to filter the CO<sub>2</sub> out of vehicle and other emissions instead? What are the options likely to mean for more remote centres like Nelson, Napier, Whanganui, and Tauranga?



**ABOUT JEFFERY TALLON CNZM, FRSNZ, HonFIPENZ:** Jeff is Professor of Physics at Robinson Research Institute, Victoria University of Wellington. He is internationally known for his research and discoveries in high-temperature superconductors (HTS), both fundamental and applied, leading eventually to commercialization through the company HTS-110 Ltd. His research has focused on the thermodynamics, magnetism, spectroscopy and electronic transport properties of superconductors.

Professor Tallon's other research interests include nanotechnology, organic/inorganic hybrid materials and physics at high pressure. He has received many awards for his work, including the Rutherford Medal, the Dan Walls Medal for Physics and, with Professor Bob Buckley, the inaugural New Zealand Prime Minister's Science Medal for commercialization of fundamental science. He is the 2015/16 IEEE Distinguished Lecturer in Applied Superconductivity. Dr Tallon has been a frequent Visiting Professor at Cambridge University and a Visiting Fellow of Trinity College Cambridge.

The MACDIARMID INSTITUTE is supporting regional development with this series of free public talks, organised in association with the Hawke's Bay Branch of the Royal Society.