

## Vortragsankündigung

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### **Exporting Hydrogen Energy from Australia to the World: Drivers & Technical Challenges**

Australia is now the world's largest exporter of liquefied natural gas (LNG), with an estimated value of over \$50 billion in 2018-19. Much of that LNG supplies large emerging economies, raising the living standards of billions of people and displacing coal combustion, greatly mitigating CO<sub>2</sub> and particulate emissions. However, multiple global forces are creating new risks and opportunities for the critical part of Australia's economy based on energy exports. These risks include massive competition from low-cost LNG suppliers and bold decarbonisation targets from importing countries planning to establish Hydrogen economies.

Momentum towards the establishment of a global Hydrogen economy continues to grow. A 2019 IEA report captured the growing number of countries with policies and mandates directly supporting Hydrogen adoption, analysed current costs of producing hydrogen with and without carbon capture, and identified how LNG exports and shipping routes could facilitate the growth of an international trade in Hydrogen. Within Australia, a National Hydrogen Strategy was released at the end of 2019, endorsed by all levels of Government. A set of applied research & development challenges central to the establishment of a Hydrogen export industry have been identified and roadmaps to overcome them have been developed.

The Future Energy Exports Cooperative Research Centre (FEnEx CRC) aims to take a central role in Australia's efforts to overcome the technical challenges facing large-scale Hydrogen exports. It brings together 28 national and international partners with expertise in LNG, Hydrogen, digital technologies and sector development from industry, government, and multiple research organisations. In this presentation, an overview of the technical challenges that the FEnEx CRC aims to address over the next decade through industrial-scale research and demonstration will be described, and opportunities for collaboration identified. Further information on the FEnEx CRC is available at [www.fenex.org.au](http://www.fenex.org.au)

### **Biography**

Professor Eric F. May  
Acting CEO, Future Energy Exports CRC  
Director, Australian Centre for LNG Futures  
The University of Western Australia (UWA)



Eric is the Chevron Chair in Gas Process Engineering at UWA which, in 2011, was endowed in perpetuity. He is also the Director of the Australian Centre for LNG Futures, an Australian Research Council Future Fellow, and was a Visiting International Professor at Ruhr-Universität Bochum in Germany from 2015-18. His research group at UWA works closely with industry, conducting projects in LNG production, flow assurance, CCS and fluid property prediction. In 2019 he led the bid to establish the Future Energy Exports CRC, which aims to conduct industrial-scale research to support LNG and Hydrogen exports from Australia. Eric was awarded the Malcolm McIntosh Prize for Physical Scientist of the Year as part of the 2012 Prime Minister's Prizes for Science.