

**Coming soon!**

Dr Mike Clarke's presentation of the following paper (including a transcript, figures, tables and references), which was originally delivered by him at the CABS IV (Central Australian Basins Symposium IV) in Darwin on 30 August 2022, is due to be published online at <https://pesa.com.au> in mid-June 2024.

## **"The Hydrogen Economy: Can It Be Based On Mineral (Natural) Hydrogen?"**

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### **Abstract**

The world has been eagerly seeking to have hydrogen as the principal energy carrier and energy source. Government leaders, world identities and gradually the general populace have come to consensus that something must be done to reign in real (or perceived) climate change. Can finding and developing natural hydrogen resources have a significant contribution to the Hydrogen Economy and therefore be a real possibility?

There have been natural gas finds in Australia that have hydrogen as a constituent. One find in the Northern Territory had hydrogen at over 10% but most finds had only trace hydrogen. Natural hydrogen can occur with helium and a sequential production path for both gases will be discussed in my talk and accompanying paper. Other ways of producing hydrogen are by reforming methane and/or partially oxidising coal or lignite with steam. The 'other ways', however, produce carbon dioxide that would need to be sequestered if the processes were claimed to be 'green/blue'.

Financial assistance from government, environmental quangos and 'green' entrepreneurs has been promised to support the development of the Hydrogen Economy. Will research be able to overcome the major technical and safety hurdles that are associated with hydrogen and the Hydrogen Economy? Only time will tell.

**The above-mentioned paper will be published online in mid-June 2024 in the PESA (Petroleum Exploration Society of Australia)'s CABS IV Special Publications (theme: Exploring Australia's Resource Frontier | Energy Transition), Volume 2, on the PESA website at <https://pesa.com.au> .**

For an extended discussion of Hydrogen and the mooted Hydrogen Economy that was peer reviewed for and published by IEAust's *AJMDE*, please see: <https://doi.org/10.1080/14488388.2022.2046325>