

# Webinar Talk on Opportunities, Challenges and Way Forward on Carbon Capture for CCUS

CPD Hours : 2 CPD Ref No : IEM23/HQ/461/T (w)

Organised by: Oil, Gas and Mining Technical Division

## SYNOPSIS

Natural gas reserves available worldwide includes varying amounts of CO<sub>2</sub> ranging from CO<sub>2</sub>-free in Siberia to as high as 90% CO<sub>2</sub> content in the Platong and Erawan fields in Thailand. The Natuna field in the Greater Sarawak Basin in Indonesia is the largest gas field in Southeast Asia, with estimated 46 trillion cubic feet of recoverable reserved.

Unfortunately, it remains unexplored due to high CO<sub>2</sub> content up to 71%. In Malaysia, CO<sub>2</sub> content from natural gas fields varies up to 87%. Over 13 trillion cubic feet of natural gas reserves are undeveloped due to the presence of high CO<sub>2</sub> content. The high CO<sub>2</sub> content in natural gas is a major issue to monetizing the gas reserves. Without the removal of its CO<sub>2</sub> content, natural gas cannot be further processed, liquefied, transported, or commercially sold. Additionally, the release of bulk CO<sub>2</sub> into environment aggravates global warming and violates the Paris Agreement that signed by all signatory nations.

Hence, there is a need for the development of technologies for the effective capture and subsequently transport for sequestration or utilization of CO<sub>2</sub> for its conversion into value added product. In this talk, the recent advances on the potential capture technologies especially to manage the CO<sub>2</sub> rich natural gas fields will be deliberated. Challenges in capturing high CO<sub>2</sub> content natural gas using well known technologies such as absorption, adsorption, cryogenic and membrane to novel technologies such as CUAS will be shared.

## SPEAKER

### **Prof. Azmi Mohd Shariff**

Azmi Mohd Shariff is a Professor in the Chemical Engineering Department and the Director of the Institute of Contaminant Management (ICM) at Universiti Teknologi PETRONAS (UTP). With over 25 years in academia, he has held various management positions at UTP, including founding and heading the CO<sub>2</sub> Research Centre and the Centre of Advanced Process Safety (CAPS). He is the founder and chairman of the Malaysia Carbon Management Society (MyCarbon) since 2019 and chaired the Loss Prevention Asia conferences in 2019, 2021, and 2023. He has secured and led more than 56 national and industrial projects worth more than RM67 million, focusing on CO<sub>2</sub> Capture, Utilization, and Storage (CCUS), and Process Safety. In 2015, he was recognized as one of Malaysia's Top Research Scientists and was named a Research Fellow in 2017 by the Academy of Science Malaysia, MOSTI.



**Saturday | 25 November 2023 | 9AM – 11AM**

**Registration Fee:**

**Student Member: Free | IEM Member: RM15 | Non-Member: RM70**

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