

SPE Symposium: CCUS Management

Delivering our Promises

4-5 October 2022

Pullman Kuala Lumpur City Centre,
Kuala Lumpur, Malaysia

go.spe.org/23SM01S

Symposium Programme



Welcome Message

On behalf of the Symposium Committee, it is our pleasure to welcome you to the third edition of the **SPE Symposium: CCUS Management**.

In 2021, we witnessed record growth in CCUS development projects around the globe and as this momentum continues, the next decade could see significant growth globally in CCUS development projects. Many governments and organisations have announced new directions, policies, projects and investments to contribute towards achieving net zero targets with CCUS as a catalyst in accelerating clean energy transition in Asia Pacific.

Themed **“Delivering our Promises”** the third edition of the SPE Symposium: CCUS Management will address the burning question on everyone’s mind: “Do we have everything in place to deliver our promises with CCUS?”

We would like to thank our committee members, speakers, sponsors, exhibitors and participants for your continued support. We encourage efforts and collaboration from our industry and its leaders to support this inclusive opportunity to bring the industry together to share and discuss the latest insights on future challenges and opportunities.

We encourage your active participation throughout the symposium and hope you find the programme valuable.



Noriani Yati Mohamad
Symposium Co-Chair
Head, Resource Development
& Management-Sarawak
Malaysia Petroleum
Management
PETRONAS



Danuwas Lambasara
Vice President - Development
Planning Department
**PTT Exploration & Production
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**This Symposium Programme is updated as at 28 September 2022*

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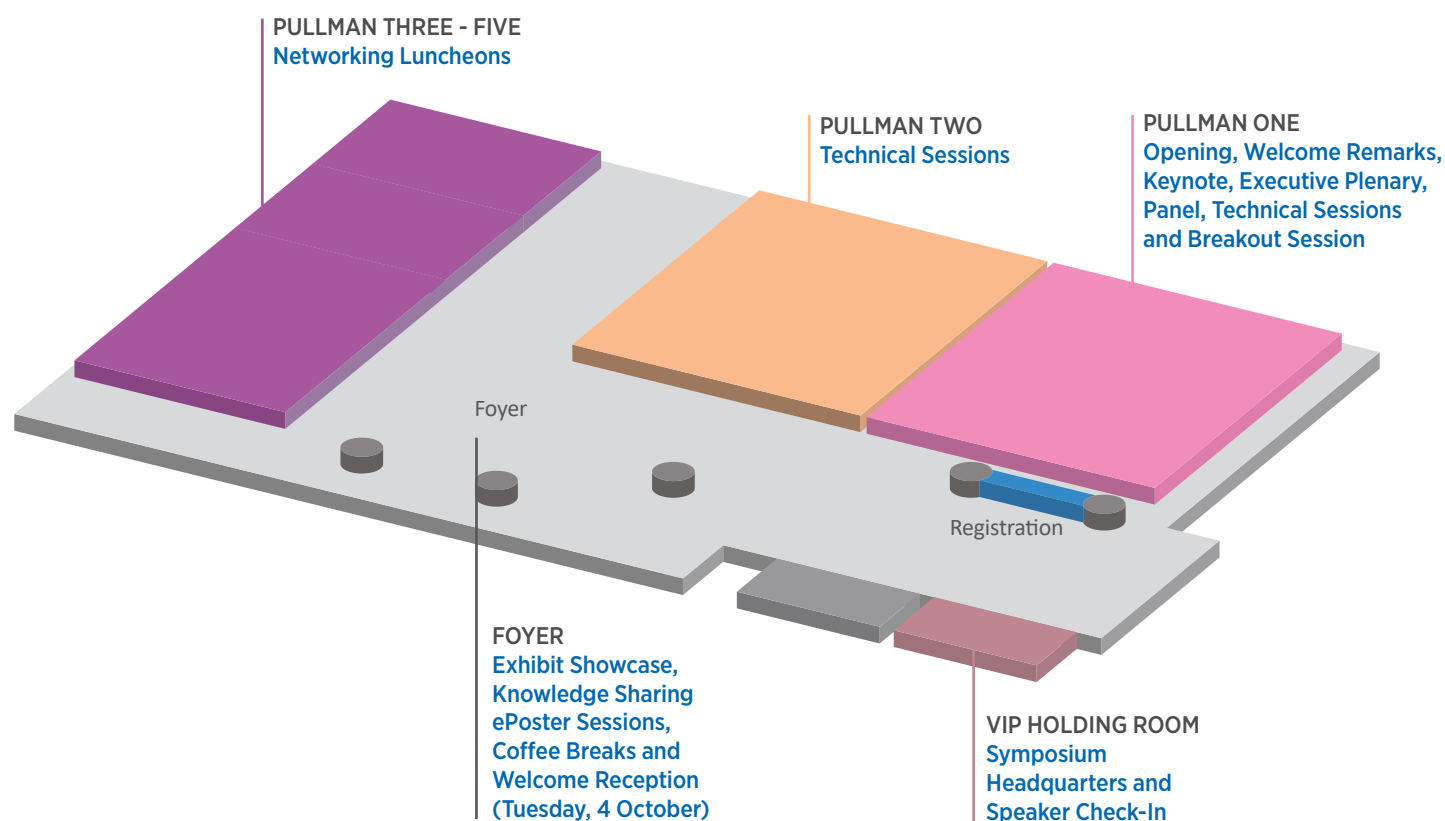
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Mohamad Kamal Hamdan
Senior Reservoir Engineer
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Meeting Room Guide

Pullman Kuala Lumpur City Centre, Level 3



Exhibitor

Beicip-Franlab Asia - Kiosk F10

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Tel: +60 3 2165 1700

Website: www.beicip.asia

Beicip-Franlab Asia (BFA) is an independent international oil and gas service company focusing on upstream subsurface consulting and technology as well as the energy transition. BFA is proud to offer a wide range of Energy Transition Solutions that includes CCUS, hydrogen, geothermal studies, economics, and policies.

Schedule of Events

Tuesday, 4 October

0630 – 0730 hours	Exhibit Showcase Move-In	Foyer, Level 3
0730 – 1830 hours	Registration	Foyer, Level 3
0730 – 1830 hours	Symposium Headquarters and Speaker Check-In	VIP Holding Room, Level 3
0900 – 1830 hours	Exhibit Showcase	Foyer, Level 3
0900 – 0930 hours	Opening, Welcome Remarks and Keynote Address	Pullman One, Level 3
0930 – 1030 hours	Executive Plenary Session: Delivering our Promises	Pullman One, Level 3
1030 – 1100 hours	Coffee Break	Foyer, Level 3
1100 – 1230 hours	Panel Session 1: CO₂ Storage Appraisal	Pullman One, Level 3
1230 – 1400 hours	Networking Luncheon	Pullman Three - Five, Level 3
1400 – 1530 hours	Technical Session 1: CO₂ Utilisation	Pullman One, Level 3
1400 – 1530 hours	Technical Session 2: Geological Storage Development	Pullman Two, Level 3
1530 – 1600 hours	Knowledge Sharing ePoster Session 1 and Coffee Break	Foyer, Level 3
1600 – 1730 hours	Panel Session 2: CCUS Hubs – State of Play and New Opportunities	Pullman One, Level 3
1730 – 1830 hours	Welcome Reception	Foyer, Level 3

Wednesday, 5 October

0800 – 1730 hours	Registration	Foyer, Level 3
0800 – 1730 hours	Symposium Headquarters and Speaker Check-In	VIP Holding Room, Level 3
0900 – 1730 hours	Exhibit Showcase	Foyer, Level 3
0900 – 1030 hours	Panel Session 3: CO₂ Utilisation and Business Value Generation	Pullman One, Level 3
1030 – 1100 hours	Knowledge Sharing ePoster Session 2 and Coffee Break	Foyer, Level 3
1100 – 1230 hours	Technical Session 3: Integrated CCUS Projects	Pullman One, Level 3
1100 – 1230 hours	Technical Session 4: R&D, Innovation and New Technologies	Pullman Two, Level 3
1230 – 1400 hours	Networking Luncheon	Pullman Three - Five, Level 3
1400 – 1530 hours	Technical Session 5: Subsurface Monitoring, R&D, Innovation and New Technologies	Pullman Two, Level 3
1400 – 1530 hours	Breakout Session: Commercial, Regulatory and Policy	Pullman One, Level 3
1530 – 1600 hours	Coffee Break	Foyer, Level 3
1600 – 1730 hours	Technical Session 6: Wells - Legacy Wells and Design for CO₂ Injection	Pullman Two, Level 3

Symposium Programme Schedule

Time	Pullman One	Pullman Two
Tuesday, 4 October 2022		
0900-0930 hours	Opening, Welcome Remarks and Keynote Address	
0930-1030 hours	Executive Plenary Session	
1030-1100 hours	Coffee Break - Foyer, Level 3	
1100-1230 hours	Panel Session 1 CO ₂ Storage Appraisal	
1230-1400 hours	Networking Luncheon - Pullman 3 - 6, Level 3	
1400-1530 hours	Technical Session 1 CO ₂ Utilisation	Technical Session 2 Geological Storage Development
1530-1600 hours	Knowledge Sharing ePoster Session 1 and Coffee Break - Foyer, Level 3	
1600-1730 hours	Panel Session 2 CCUS Hubs - State of Play and New Opportunities	
1730-1830 hours	Welcome Reception - Foyer, Level 3	
Wednesday, 5 October 2022		
0900-1030 hours	Panel Session 3 CO ₂ Utilisation and Bussiness Value Generation	
1030-1100 hours	Knowledge Sharing ePoster Session 2 and Coffee Break - Foyer, Level 3	
1100-1230 hours	Technical Session 3 Integrated CCUS Projects	Technical Session 4 R&D, Innovation and New Technologies
1230-1400 hours	Networking Luncheon - Pullman 3 - 6, Level 3	
1400-1530 hours	Breakout Session Commercial, Regulatory and Policy	Technical Session 5 Subsurface Monitoring, R&D, Innovation and New Technologies
1530-1600 hours	Coffee Break - Foyer, Level 3	
1600-1730 hours		Technical Session 6 Wells - Legacy Wells and Design for CO ₂ Injection

View the full symposium programme
and speakers list online

**Find
Out
More**

General Information

REMINDER: SYMPOSIUM BADGES MUST BE WORN AT ALL TIMES

Venue

Pullman Kuala Lumpur City Centre

Jalan Conlay, 50450 Kuala Lumpur, Malaysia

Tel: +60 3 2170 8888

Website: www.pullman-kualalumpur-citycentre.com

Event HQ and Speaker Check-In

VIP Holding Room, Level 3

Pullman Kuala Lumpur City Centre

Speakers, moderators and session chairs are required to report to the Symposium Headquarters and Speaker Check-In Room to load/review their PowerPoint slides. Changes to presentation slides will not be accepted less than four hours prior to the session.

Speakers, moderators and session chairs must report to their assigned session rooms 30 minutes before the session begins.

Please collect your delegate badge before reporting to the Symposium Headquarters and Speaker Check-In Room.

Badge Collection

Symposium and exhibition badges are required for admission into the event and must be worn at all times. Badges are non-transferable. Use of a badge by a person not named on the badge is grounds for confiscation.

Badges can be collected at the **Registration Counter, Level 3** during the following times:

- Tuesday, 4 October: 0730-1830 hours
- Wednesday, 5 October: 0800-1730 hours

Safety and Security

The safety and security of our event attendees are of utmost importance. Please be aware of and observe the following:

- Safety measures to continue to mitigate COVID-19 include:
 - Attendees are encouraged to wear their mask at the event
 - Practice social distancing
- Symposium and exhibition badges must be worn at all times while at the event venue. Use of a badge by a person not named on the badge is grounds for confiscation.
 - If you lose your badge, please return to the registration counter to obtain a replacement.
- No one under the age of 18 is permitted in the exhibition halls.
- Be aware of your surroundings, remain alert and be vigilant.
- Should you observe any suspicious packages or behaviour, please report to event/venue staff immediately.
- Due to the popularity of some session topics, it is possible for overcrowding to occur in a session or meeting room. Should this occur, we must comply with policies regarding room capacity and limit admittance to a room that is at capacity. Please make plans to arrive early for sessions that you have a strong interest in attending.
- Please remember to stay hydrated throughout the event.
- In the event of an emergency, SPE and/or Pullman Kuala Lumpur City Centre staff will provide attendees with the necessary information and instructions.

Mobile Devices

As a courtesy to the speakers and your fellow attendees, please put your mobile devices on silent during meetings and sessions.

General Information

REMINDER: SYMPOSIUM BADGES MUST BE WORN AT ALL TIMES

Exhibit Showcase Hours

The exhibit showcase is open to all attendees at the following times:

- Tuesday, 4 October: 0900-1830 hours
- Wednesday, 5 October: 0900-1730 hours

Lost and Found

Lost and found items will be placed at Symposium Headquarters and Speaker Check-In Room.

First Aid

In case of an emergency situation, please alert the nearest SPE and/or Pullman Kuala Lumpur City Centre staff immediately.

Prayer Room

Prayer rooms are located at Level 5
Pullman Kuala Lumpur City Centre

Business Centre

Business Centre is located at Level 4
Pullman Kuala Lumpur City Centre

Photography and Videography

All symposium sessions and the exhibit showcase are protected by international copyright laws.

Photography and video/audio recording of any kind in symposium sessions and the exhibit showcase are prohibited without prior written permission by SPE.

Alcohol

We recognise that legitimate serving of alcohol beverages in the process of conducting business and social activities is acceptable. However, we also recognise that the use and consumption of alcohol carries the requirement for all attendees to consume these beverages responsibly and in keeping with our professional code of ethics and conduct. We strongly oppose the abuse and misuse of alcohol.

Consent to Use of Multimedia

Attendance or participation in SPE events and other activities constitutes an agreement by the registrant to SPE's use and distribution of the registrant's image or voice in promoting future SPE events in any way SPE deems appropriate.

Sustainability Statement

SPE is committed to ensuring that the environmental of our events is kept to a minimum. We aim to make progress in the field of sustainability through digitalisation, reducing energy usage, promoting eco-friendly mobility, reducing water consumption, and limiting waste, all core values in keeping with those of the oil and gas industry.



Opening, Welcome Remarks and Keynote Address

Tuesday, 4 October 2022 | 0900-0930 hours

Pullman One, Level 3

Opening Remarks



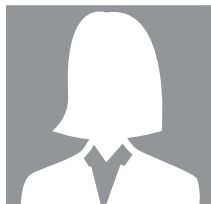
Danuwas Lambasara
Vice President - Development
Planning Department
**PTT Exploration & Production Public
Company Limited**

Welcome Remarks



Montri Rawanchaikul
Chief Executive Officer
**PTT Exploration & Production
Public Company Limited**

Keynote Address



Mahpuzah Abai
Chief Executive Officer
**PETRONAS Technology Ventures
Sdn. Bhd.**

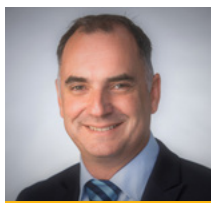
Executive Plenary Session

Delivering Our Promises

Tuesday, 4 October 2022 | 0930-1030 hours

Pullman One, Level 3

Speakers



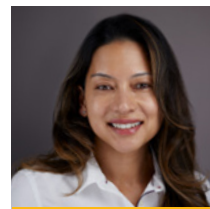
Phillip Solomon
Executive Director
GaffneyCline



Koji Yamamoto
Vice President, Oil & Gas
Upstream Unit
**Japan Oil, Gas and Metals
National Corporation (JOGMEC)**



Emry Hisham Yusoff
Senior General Manager
Carbon Management
PETRONAS



Patricia Seevam
General Manager
Transformation and
Energy Transition
Shell

Moderator



Danuwas Lambasara
Vice President - Development
Planning Department
**PTT Exploration & Production
Public Company Limited**

Many discussions are centred on the vital role of CCUS in reducing carbon dioxide emissions while ensuring energy security globally. Leaders recognise the importance of CCUS technology as an essential tool in the global effort to achieve deep reductions in carbon dioxide emissions and prevent global temperature rises in future decades.

Analysis by the IEA consistently shows that CCUS is a critical part of a complete clean energy technology portfolio that provides a sustainable path for mitigating greenhouse gas emissions while ensuring energy security.

Many nations and organisations have pledged to do their part in reducing carbon emissions to achieve their net zero targets. However, the main question is: "Do we have everything in place to deliver our promises with CCUS?"

This session will engage leaders to discuss opportunities and challenges, share actionable insights, best practices, and technological advancements in CCUS and its role as a catalyst in accelerating clean energy transition.

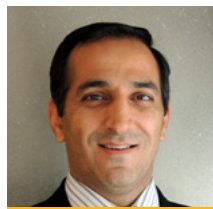
Panel Sessions

Panel Session 1: CO₂ Storage Appraisal

Tuesday, 4 October 2022 | 1100 - 1230 hours

Pullman One, Level 3

Speakers



Rahim Masoudi
Group Technical Authority & Custodian
Reservoir Engineering
Resource Development & Management
Malaysia Petroleum Management
PETRONAS

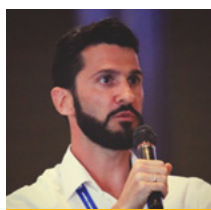


Iain Macdonald
Principal Advisor - Technical
Carbon Advocacy & OGCI CCUS
Workstream Lead
Shell

Session Co-Chairs



Juho Lipponen
Coordinator
**Clean Energy Ministerial
CCUS Initiative**



Yakov Kozlov
Digital Reservoir Engineering Manager
Schlumberger

Carbon Capture and Storage (CCS) has been consistently utilised as a tool to directly address emissions from the energy and industrial sectors, and forms a significant component of plans to reach net-zero. However, despite the critical importance of the technology and substantial R&D to date, there is currently a huge gap between the current global deployment of this technology and that which will be ultimately required.

Among the issues that this panel will discuss include:

- What are the major factors that contribute to the deployment of CCS projects?
- Current status of CCS storage
- Data and methods

Panel Sessions

Panel Session 2: CCUS Hubs - State of Play and New Opportunities

Tuesday, 4 October 2022 | 1400-1530 hours

Pullman One, Level 3

Speakers



Colin Wood
Team Leader and Principal
Research Scientist
CSIRO

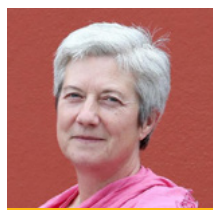


Cindy Kaharmen
Development Planning Manager
ExxonMobil



Nora'in Md Salleh
Head CCS
PETRONAS

Session Co-Chairs



Linda Stalker
Senior Principal Research Scientist
CSIRO



Tony Zhang
Carbon Management and Energy
Transition Advisor – Asia Pacific
GaffneyCline



M Khaidhir Abdul Hamid
Head of Delivery
PETRONAS

The CCUS project pipeline is showing robust growth with 27 commercial CCUS facilities operating around the world as of September 2021, with a total capture capacity of about 40 million tonnes of CO₂ per year. Capacity in the pipeline, however, has risen by 46% in the first nine months of 2021 and now totals 111 million tonnes per year.

According to the IEA, more than 100 new CCUS facilities were announced in 2021. There are CCUS projects or planned developments in 25 countries around the world, with three-quarters in the US and Europe. Growth is accelerating as governments and companies focus on how to implement net zero targets, interest in low-carbon hydrogen grows, and CCUS hubs open scalable options for industrial decarbonisation.

There are currently around 40 CCUS hubs in development around the world. Over half of these and the most advanced are in Europe, where a combination of rising carbon prices and net-zero commitments are driving the search for large-scale industrial decarbonisation. There is a growing tendency for consolidation and collaboration among these emerging hubs.

This panel session will discuss:

- Strategy in maturing CCS / CCUS projects
- National, regional, and global carbon markets, and how to make them work for CCUS

Panel Sessions

Panel Session 3: CO₂ Utilisation and Business Value Generation

Wednesday, 5 October 2022 | 0900-1030 hours

Pullman One, Level 3

Speakers



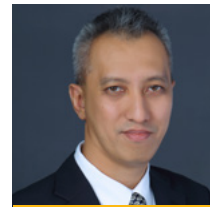
Cécile Plain
Technology Principal Expert
New Development &
Transformation
Axens



Mitsuhiro Kohara
General Manager
International Certification &
Standards Harmonization Group
Planning Department
The Japan Gas Association

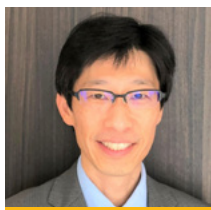


Bundit Pattanasak
Senior Vice President
Technology Management Division
**PTT Exploration & Production
Public Company Limited**



Mohamad Zaini Md Noor
Head CCUS
PETRONAS Research Sdn. Bhd.

Session Co-Chairs



Hiroshi Okabe
Director EOR Division
Technology Department
JOGMEC



Mohamad Kamal Hamdan
Senior Reservoir Engineer
**PTT Exploration & Production
Public Company Limited**

Averting the most catastrophic effects of climate change will need us to limit global warming to 1.5°C. This cannot be achieved without removing carbon dioxide from the atmosphere. Besides capturing carbon from fossil fuel plants directly, there are a variety of ways to remove CO₂ from the atmosphere. The problem is that many of these strategies are still relatively expensive. Finding new commercial uses for the captured CO₂ is key to lowering the costs of these technologies and scaling them up.

Captured CO₂ has long been injected into depleted oil fields to enhance oil recovery. It has also been pumped into greenhouses to boost plant growth. But today, many companies and researchers are developing new uses and products for captured CO₂, such as to develop a variety of concrete, chemicals, and fuels. McKinsey & Company estimates that by 2030, CO₂-based products could be worth between \$800 billion and \$1 trillion, and the use of CO₂ could reduce greenhouse gas emissions by a billion metric tons yearly. The Global Carbon Initiative projects that, with the proper incentives, by 2030 the overall CO₂ based product industry could utilise seven billion metric tons of CO₂ each year: about 15 percent of our current global emissions.

This panel session will also discuss:

- Techno-economics of the sector and how it informs decision making and investment
- Value chain comparisons between offshore versus onshore, or by countries that either have tax versus other incentives

Contact

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Visit go.spe.org/23SM01S for more information about SPE Symposium: CCUS Management



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