

ENERGY TRANSITION: THE PATH TO NET ZERO



24TH WORLD  
**PETROLEUM  
CONGRESS**  
**2023**  
CALGARY | CANADA

**17 - 21 SEPTEMBER**

# TECHNICAL PROGRAMME

SEPTEMBER 17 - 21



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# TECHNICAL BLOCKS

A close-up photograph of a wood grain, showing wavy, horizontal lines in shades of brown and tan.

## BLOCK 1

Transition in  
Exploration  
and Production

A dark blue background with glowing, concentric circular lines and a bright blue circle at the top, resembling a stylized eye or a lens.

## BLOCK 2

Transition in  
Refining,  
Petrochemicals  
and Products

An abstract image featuring vibrant, glowing light trails in red, pink, and blue, creating a sense of motion and energy.

## BLOCK 3

Transition in  
Gas and  
Transportation

An abstract image with sharp, angular, and reflective geometric shapes in red and blue, creating a futuristic and complex visual.

## BLOCK 4

Leadership  
Challenges in  
Transition



# BLOCK 1

## TRANSITION IN EXPLORATION AND PRODUCTION

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**Forum 1** - New Supply Sources to Meet Global Energy Demand

**Forum 2** - Innovations for Cleaner Production

**Forum 3** - Sustainable Ways to Maximise Recovery

**Forum 4** - Carbon Capture and Storage

**Forum 5** - New Technologies in Geoscience

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**Day 1, Monday, 18 September 2023 | 11:15 - 12:15 | Auditorium 4**

**BLOCK 1 Keynote Moderator**

**Nils Telnaes, Vice President Exploration International Onshore West, Equinor, Norway**

**BLOCK 1 Keynote Speaker**

**Dr. Ghaithan Muntasheri, Director, EXPEC Advanced Research Center Saudi Aramco, Saudi Arabia**





# Block 1 Forum 1

## New Supply Sources to Meet Global Energy Demand

With global energy demand expected to increase substantially in the next few decades, the world will continue to need a wide range of energy sources. As current oil and gas resources deplete, new supply sources are needed including new basins, and unconventional (oil sands, shale, tight oil and gas, and gas hydrates) to meet continued oil and gas demand and provide feedstock for the production of blue hydrogen and rare gases in the transition to a lower carbon world.

### Forum Chair

**Mr. Chi-Tak Yee**, Chief Technology Officer (Retd.), MEG Energy, Canada

### Vice Chair

**Prof. Lirong Dou**, Executive Vice President, CNPC Research Institute of Petroleum Exploration & Development, China

## Paper Selection

Day 1, Monday, 18 September 2023 | 14:45 - 15:45 | Auditorium 4

### The Research, Development, and Application of Key Geophysical Technologies for Unconventional Shale Oil & Gas

**Presenter:** Mr. Kai Xu, Senior Engineer, Sinopec Geophysical Research Institute, China

### Seismic Exploration Challenge for the Unconsolidated Biogenic Gas Reservoir, Offshore Japan

**Presenter:** Mr. Fuminori Honda, Manager, Exploration & Development Department, Japan Petroleum Exploration Co. Ltd., Japan

### Margarita 10: Drilling Strategy of the Fastest Well in the Bolivian Subandean Region

**Presenter:** Mr. Mario Bertarelli, Eagleford D&C Manager, N. American Unconventionals, USA

## Poster Selection

Day 2, Tuesday, 19 September 2023 | 10:00 - 11:45 | Poster Plaza Stage 1

### New Canadian Oil & Gas Supply - A Key Component of Energy Transition

**Presenter:** Dr. Brad Hayes, President, Petrel Robertson Consulting Ltd., Canada

### Real-Time Steam Front Identification Method Applied Successfully in Superheated Steam Flooding Pilot of Bohai Bay

**Presenter:** Mr. Guangming Pan, Reservoir Engineer, CNOOC, China

### Successful Completion of Jurassic Gas Data Integration and Analytics Dashboard, Workflow Automation, and Pore-to-process Implementation

**Presenter:** Ms. Moudi Fahad Al-Ajmi, Manager Gas Fields Development Group, Kuwait Oil Company, Kuwait

### Liquid Hydrogen Production Associated with Qatar Natural Gas Production

**Presenter:** Ms. Maryam Al-Kaabi, Lab Quality Specialist, Qatar Gas Operating Company Ltd., Qatar

### Enabling Enhanced-geothermal-systems, a Sustainable Energy Source: Designing Corrosion Resistant Nano-composite Tubing with Near-Zero Thermal Conductivity

**Presenter:** Dr. Kamel Ben Naceur, Chairman, DAMORPHE, USA

### Deep Shale Gas in China: Resource Exploration and Development Practice

**Presenter:** Mr. Hongyan Wang, Director, PetroChina Research Institute, China

### Collaborative Technology of Oil Reservoir Underground Gas-Oil Storage Construction and Enhance Oil Recovery

**Presenter:** Mr. Jinfang Wang, Senior Engineer, RIPED, CNPC, China

### Mechanical Joint for Liquid Hydrocarbon Pipeline

**Presenter:** Abdullah Alsultan, Maintenance Engineer, Saudi Aramco, Saudi Arabia

## Block 1 Forum 2

### Innovations for Cleaner Production

The upstream sector is continuing to apply new technologies to achieve continuous improvement in minimising the environmental impact of its operations including those aimed at: reducing GHG and other emissions; reducing freshwater use; recycling and/or safe disposal of produced water; reducing spills; utilisation of waste heat; electrification; limiting operational footprints; and facilitating safe and timely abandonment of wells and facilities and reclaiming sites at the end of their useful life. This forum will showcase new technologies and other innovations being applied in both conventional and unconventional oil and gas operations to achieve cleaner production of oil and gas resources and lower environmental impact.

#### Forum Chair

**Mr. Mohammad Al Mulhim, Vice President, Southern Area Oil Producing, Saudi Aramco, Saudi Arabia**

#### Vice Chair

**Prof. Yijin ZENG, Chief Expert of SINOPEC, Professor, SINOPEC Research Institute of Petroleum Engineering, China**

## Paper Selection

Day 2, Tuesday, 19 September 2023 | 10:15 - 11:15 | Auditorium 4

#### Low-cost Accelerated Transition from Carbon to Emissions Free Hydrogen Economy

**Presenter:** Mr. Gerald Chalifoux, President & CEO, Petrospec Engineering Inc., Canada

#### Game Changer In Subsurface Flare Reduction

**Presenter:** Mr. Moosa Al Rahbi, Production Technologist, Petroleum Development Oman, Oman

#### Facility Energy Strategy Development and Process Optimization: A Case Study from Saudi Aramco Khurais Facility

**Presenter:** Mr. Hatem Bajuaifer, Process Engineer, Saudi Aramco, Saudi Arabia

#### Research and Application of Oil-contaminated Drill Cuttings Separation and Recovery Technology

**Presenter:** Mr. Xunyong Nie, Senior Engineer, CNPC Greatwall Drilling Fluid Company, China

## Poster Selection

Day 2, Tuesday, 19 September 2023 | 14:15 - 16:00 | Poster Plaza Stage 1

#### Nitrogen: A Profoundly Simple Solution to Methane Venting on Remote Well Sites

**Presenter:** Mrs. Kelly Doody, Chief Marketing Officer, Kathairos Solutions, Canada

#### Field Trial of New Expander Technology Opens Small Scale Power Applications

**Presenter:** Mr. James Cleland, President, TAKEnergy Inc., Canada

#### HP Glators and HP SOS: A Potential Solution for Oil Spillage Remediation and Recovery

**Presenter:** Dr. Siva Kesava Raju Chinthalapati, Senior Manager, HPCL Green Research & Development Centre, India

#### Integrated Solution to Mitigate and Prevent Black Powder Phenomena in West Kuwait Operation Facilities

**Presenter:** Dr. Abdullah Jamsheer, Chief Chemist, Kuwait Oil Company (KOC), Kuwait

#### PDO's Oil South's Journey & Roadmap to a Net - Zero Energy Business By 2050

**Presenter:** Mr. Hussain Al Noumani, Head of Production Programming, Petroleum Development Oman LLC, Oman

#### Unlocking Economic Zero Bleed Pneumatic Instrument Air Retrofits

**Presenter:** Mr. Ben Klepacki, Co - Founder & CRO, Westgen Technologies Inc., Canada

#### Qatargas Leading Initiative in Wastewater Treatment and Injection Management

**Presenter:** Mr. Meshaal Al-Rashid, Production Engineer, QatarGas, Qatar

#### Improved Oil Sands Sustainability Through Partial Upgrading

**Presenter:** Mr. Joe Gasca, Chairman, Fractal Systems Inc.



# Block 1 Forum 3

## Sustainable Ways to Maximise Recovery

Upstream has been contributing to significant advancement of innovation and custodianship of the environment, maximising recovery while minimising the carbon footprint and overcoming continuous cost challenges. In this session, we will share advancements in technology innovation and digitalisation, subsurface modelling, best in class reserves management, water management, drilling and production technologies for IOR and EOR, while recognising climate challenges and the role of enhanced recovery in our transition to a low carbon future.

### Forum Chair

**Mr. Arnfinn Kjosavik**, Leading Advisor Reservoir Technology, Equinor, Norway

### Vice Chairs

**Mr. Takaaki Uetani**, Manager, Reservoir Engineering, INPEX Corporation, Japan

**Dr. Pinar Oya Yilmaz**, Chairman, Board of Directors, IPTC, United States

## Paper Selection

Day 2, Tuesday, 19 September 2023 | 13:30 - 14:30 | Auditorium 4

**Energy Efficient Reservoir Drainage: from Prognosis to Implementation of Emission Reduction Measures**

**Presenter:** Mr. Jørgen Silseth, Project Leader, Equinor, Norway

**Quick Decision-Making Using Capacitance Resistance Model for Recovery Optimization in Matured Oil Field**

**Presenter:** Mr. Tomonori Hasegawa, Reservoir Engineer, Japan Petroleum Exploration, Japan

**Energy Prediction and Monitoring on Cloud - Case Studies**

**Presenter:** Dr. Rahul Raveendran, Data Scientist, APC Specialist, Spartan Controls Ltd., Canada

**Enhancing Shale Gas Recovery by Injecting Supercritical CO<sub>2</sub> and CO<sub>2</sub> Storage in Shale Gas Reservoirs**

**Presenter:** Mr. Ziqi Qiu, Assistant Engineer, Shale Gas Research Institute, Southwest Oil and Gas Field Branch, CNPC, China

## Poster Selection

Day 3, Wednesday, 20 September 2023 | 10:15 - 12:00 | Poster Plaza Stage 1

**Electric, Intelligent Valve Technology: Improving EOR Sweep Efficiency and Recovery Factor**

**Presenter:** David Sask, Production Engineering Consultant, David Sask Technology, Canada

**Reservoir Response to Variation in Injection and Production at Different Timescales**

**Presenter:** Mr. Per Eirik Strand Bergmo, Research Scientist, SINTEF Industry, Norway

**Sustainable Development and Future Strategy of China Oil Companies on the Path to Energy Transition**

**Presenter:** Miss Yi Tong, Development Geologist, CNOOC International, China

**Optimal Carbon Capture and Sequestration Coupled with Enhanced Gas Recovery for Wet Gas Reservoirs**

**Presenter:** Dr. Uchenna Odi, Petroleum Engineering Specialist, Aramco Americas, USA

**Applications of Six Sigma Methodology in Improving Energy Efficiency in Oil & Gas Operations**

**Presenter:** Mr. Hilal Al Ghefeili, Production Programming Lead, Petroleum Development Oman, Oman

**History Matching of Multi-probe Chemical Sensing Data to Estimate Inter-Well Distributions**

**Presenter:** Dr. Hsieh Chen, Petroleum Engineer, Aramco, USA

**Energy Efficient Reservoir Drainage: from Prognosis to Implementation of Emission Reduction Measures**

**Presenter:** Mr. Jørgen Silseth, Project Leader, Equinor, Norway

**Quick Decision-Making Using Capacitance Resistance Model for Recovery Optimization in Matured Oil Field**

**Presenter:** Mr. Tomonori Hasegawa, Reservoir Engineer, Japan Petroleum Exploration, Japan

**Enhancing Shale Gas Recovery by Injecting Supercritical CO<sub>2</sub> and CO<sub>2</sub> Storage in Shale Gas Reservoirs**

**Presenter:** Mr. Ziqi Qiu, Assistant Engineer, Shale Gas Research Institute, Southwest Oil and Gas Field Branch, CNPC, China

**Energy Prediction and Monitoring on Cloud - Case Studies**

**Presenter:** Mr. Rui Nian, Head of Technology, BlueMarvel AI, Canada

## Block 1 Forum 4

### Carbon Capture and Storage

As the petroleum industry works to reduce GHG emissions to net-zero, one key tool at their disposal is Carbon Capture, Utilisation and Storage (CCUS). Capturing emissions can be done at their source, such as at large industrial facilities, or by removing CO<sub>2</sub> emissions directly from the atmosphere through Direct Air Capture (DAC), or through Nature Based Solutions. Once GHG's such as CO<sub>2</sub> are captured, they can be stored underground or utilised for other purposes. This forum will examine the current state of the CCUS industry, what is required for it to grow, and the nascent technologies that will deliver the large-scale growth of CCUS required to address global emissions.

#### Forum Chair

**Mr. Chris Grant, Former VP, Pathways to Net Zero, Suncor, Canada**

#### Vice Chairs

**Dr. Naif Alqahtani, Director of CCUS Center, KACST National Center for Carbon Management Technology, Saudi Arabia**

**Mr. Suleyman Coskun, Researcher, University of Manchester, Exploration Geoscientist, Turkish Petroleum Corporation**

## Paper Selection

Day 3, Wednesday, 20 September 2023 | 11:30 - 12:30 | Auditorium 4

#### Massive-scale CCUS: Why, Where, and How Will It Be Built Out?

**Presenter:** Mr. Peter Findlay, Director, CCUS Economics, Wood Mackenzie, Canada

#### The Agi Technique in the Monitoring in the Saline Aquifer- Krechba Field Algeria

**Presenter:** Mr. Faycal Zeboudj, Subsurface Co-Manager, Sonatrach, Algeria

#### An indicative comparison of the cost of CO<sub>2</sub> Capture in the low and moderately concentrated CO<sub>2</sub> feedstocks

**Presenter:** Mr. David Mercer, Director, Head of Technology – Energy Solutions, Fluor Corporation, Canada

## Poster Selection

Day 3, Wednesday, 20 September 2023 | 14:00 - 15:45 | Poster Plaza Stage 1

#### Feasibility of Carbon Storage in Depleted Shallow Gas Fields: A Numerical and Statistical Analysis

**Presenter:** Dr. Xiaolong Peng, Research Scientist, Geological Survey of Canada Calgary, Canada

#### Potential of CO<sub>2</sub> Storage in a Depleted Gas Reservoir with Bottom Water

**Presenter:** Dr. Xiaocong Lyu, Associate Professor, China University of Petroleum (Beijing), China

#### Next Generation Sorption Technology for CO<sub>2</sub> Capture from Industrial Flue Gases

**Presenter:** Mr. Annaji Rajiv Kumar Tompala, Chief Manager - R&D, Hindustan Petroleum Corporation Limited, India

#### Simulation of Flooding and Sequestration of Supercritical CO<sub>2</sub> in Fractured Shale Oil Reservoir

**Presenter:** Dr. Xurong Zhao, Ph.D. Student, China University of Petroleum at (Beijing), China

#### Microfluidic Study of CO<sub>2</sub> Storage in Saline Aquifers

**Presenter:** Dr. Karol Dąbrowski, Assistant Professor, AGH University of Science and Technology, Poland

#### Impact of CO<sub>2</sub> Dry-out on Well Injectivity for Carbon Geological Sequestration in Saline Aquifers

**Presenter:** Dr. Huihai Liu, Sr Petroleum Engineering Consultant, Aramco Research Center, USA

#### Alberta Carbon Trunk Line - Enabling CCUS Infrastructure

**Presenter:** Mr. Jeff Pearson, President - Carbon, Wolf Midstream, Canada

#### Carbon Dioxide Capture Through Microbial Route in Pilot Scale

**Presenter:** Mr. Mukul Gupta, Senior Manager SD & Environment, GAIL India Ltd., India

#### A Glimpse at Carbon Capture, Utilisation and Storage (CCUS) in Brazil's Oil and Gas Sector

**Presenter:** Dr. Nathalia Oliveira de Castro, Energy Research Analyst, Energy Research Office, Brazil

#### Advanced Gas and Carbon Dioxide Storage in the Aquifer - A Machine Learning Approach

**Presenter:** Mr. Jan Barbacki, Research Assistant, AGH University of Science and Technology, Poland



# Block 1 Forum 5

## New Technologies in Geoscience

Technology is changing the way we do business, and the geoscience industry is no different. The oil and gas industry has historically been at the forefront of applying new technologies due to their economic impact. Digital technology advances are rapidly altering the landscape of geoscience and the simultaneous emergence of access to large data sets and machine learning tools is and will continue to change the way we work. This session will illustrate the impact of new technologies on the way we work with geological data in the oil and gas industry today.

### Forum Chair

**Mr. Ivan Kozak, Partner & Global Geoscience Lead, Boston Consulting Group, United States**

### Vice Chairs

**Mr. Damaso Contreras Tebar, Geophysicist, PEMEX, Mexico**

**Ms. Maria Yodalis Hernandez, Union CubaPetóleo (CUPET), Cuba**

## Paper Selection

**Day 3, Wednesday, 20 September 2023**  
**16:15- 17:15 | Auditorium 4**

### Geophysical Applications that will Add Value in Future Energy Developments

**Presenter:** Mr. John Duhault, President, Starbird Enterprises, Canada

### Artificial Intelligence Assisted Real-time Diagnostics of Hydraulic Fracturing in Unconventional Reservoirs

**Presenter:** Prof. Mao Sheng, Professor, China University of Petroleum (Beijing), China

### Integrated Quantitative Interpretation Through Web - Avo Technology to Reduce Uncertainties for Exploration & Fields Development, Wheatstone

**Presenter:** Talal Esmail, Operations Manager, KUFPEC, Australia

### Review of Digital Rock Physics and Its Methods

**Presenter:** Dr. Uchenna Odi, Petroleum Engineering Specialist, Aramco Americas, USA

## Poster Selection

**Day 4, Thursday, 21 September 2023 | 10:00 - 11:45 | Poster Plaza Stage 1**

### Efficient Sectorization of Reservoirs for Upscaling Based on Artificial Intelligence: A Pilot Study

**Presenter:** Mr. Fernando Perin Munerato, Reservoir Specialist, Solpe, Brazil

### Application of Digital Technology - Artificial Intelligence (AI) & Machine Learning (ML) in the Geoscientific Field

**Presenter:** Mr. Ankur Bikash Chatterjee, Chief Manager Geophysicist, Gail India Limited, India

### Optimizing a New Stimulation Treatment to Enhance Well Productivity Using Numerical Simulation

**Presenter:** Dr. Huihai Liu, Sr Petroleum Engineering Consultant, Aramco Research Center, USA

### First Worldwide Implementation of 6-inch Slim Advanced Downhole Fluid Analyzer in North Kuwait Jurassic Gas

**Presenter:** Mr. Mejbil Saad Al-Azmi, Senior Geologist, Kuwait Oil Company, Kuwait

### Study of Geology and Engineering Double Sweet Spots Based on 3D Seismic Data

**Presenter:** Miss Qiuping Qin, Post Doctor, SINOPEC Research Institute of Petroleum Engineering Co Ltd, China

### Insights into Structural Configuration of Tripura Fold Belt Using PST Data and its Integrated Interpretation

**Presenter:** Mrs. Sushma Rawat, Director (Exploration), Oil & Natural Gas Corp Ltd, India

### Innovative Equipment Boosts Ocean Bottom Node (OBN) Acquisition

**Presenter:** Mr. Yang Li, Geophysics, BGP Offshore, China

### Using Genetic Programming for Predicting Gas Well Performance at the Early Stage of Field Development

**Presenter:** Prof. Jerzy Stopa, Reservoir Engineer Professor, Polish Oil & Gas Company (PGNIG) and ORLEN, Poland

### Predict Capillary Pressure and Relative Permeability from High-resolution Images

**Presenter:** Ms. Stacey Althaus, Senior Lab Scientist, Aramco Americas: Aramco Research Center- Houston, USA





# BLOCK 2

TRANSITION IN REFINING,  
PETROCHEMICALS &  
PRODUCTS

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**Forum 6** - CO2 Utilisation and Removal in Products  
and Processes

**Forum 7** - Emission Reduction and Recycling in  
Refining & Petrochemicals Facilities

**Forum 8** - Cleaner Fuels

**Forum 9** - Innovation in Products

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**Day 1, Monday, 18 September 2023 | 11:15 - 12:15 | Auditorium 5**

**BLOCK 2 Keynote Moderator**

**Prof. Frank Behrendt, President's Representative for International Affairs, Fundraising and Alumni,  
Technische Universität Berlin, Germany**

**BLOCK 2 Keynote Speaker**

**Mr. Krisztian Pulay, SVP, Group Downstream Development, Mol, Hungary**



## Block 2 Forum 6

### CO2 Utilisation and Removal in Products and Processes

In many cases (e.g. in the field of mobility), the goal of a comprehensive reduction of CO2 emissions cannot only focus on the operating phase (fuel consumption), but must also take into account the manufacturing and subsequent dismantling phase. This results in the need for a multifaceted analysis of partly small-scale product flows and the associated processes. This forum will explore possible ways of capturing CO2 from processes, using it in closely coupled production paths which can be implemented in an economically justifiable manner, and the utilisation of CO2 by converting it into useful products.

#### Forum Chair

**Mr. Todd Spengeman, Director Standard Amines & Gas Treatment, BASF Corporation, United States**

#### Vice Chairs

**Dr. Ibrahim Abba, Head, Technology Commercialization, Technology Oversight & Coordination, Saudi Aramco, Saudi Arabia**

**Mr. Yoshiyuki Watanabe, Deputy Director, Technology Development Center, Sustainability Co-Creation Unit of JGC Holdings Corporation, Japan**

## Paper Selection

**Day 1, Monday, 18 September 2023**  
**14:45 - 15:45 | Auditorium 5**

#### **CO2 Recovery System Using DDR-type Zeolite Membrane: The First Industrial Demonstration in a CO2-EOR Field**

**Presenter:** Mr. Hiroaki Hasegawa, Team Leader, JGC Holdings Corporation, Japan

#### **Decarbonising Hard-to-abate Industries with One-step Carbon Capture**

**Presenter:** Mr. Travis Balask, President and CEO, Cool LNG Inc., Canada

#### **Utilisation of CO2 in Oxidative Dehydrogenation of Light Alkanes to Produce Olefins and Syngas**

**Presenter:** Prof. Mohammad Hossain, Professor, King Fahd University of Petroleum and Minerals, Saudi Arabia

## Poster Selection

**Day 2, Tuesday, 19 September 2023 | 10:00 - 11:45 | Poster Plaza Stage 2**

#### **Innovative Syngas/CO Production Catalyst for Utilization of CO2 (ct-co2ar(tm) Catalyst)**

**Presenter:** Mr. Satoshi Morikami, General Manager, Technology Development Dept., Chiyoda Corporation, Japan

#### **Cargen: Novel Technology for Decarbonizing Natural Gas Processing Plants from the Midstream to Downstream**

**Presenter:** Prof. Nimir Elbashir, Professor/Director of Gas & Fuels Research Center, Texas A&M University, Qatar

#### **Technical Progress in the Production of Electronic Grade Ethylene Carbonate by CO2 from EO/EG Unit Tail-Gas**

**Presenter:** Dr. Wenjun He, Researcher, Sinopec Shanghai Research Institute of Petrochemical Technology, China

#### **Green Process for Polycarbonate Synthesis from CO2 Derived Carbonate Molecule**

**Presenter:** Mr. Bennet Chelliah, Chief Manager, Hindustan Petroleum Corporation Ltd., India

#### **CO2 Capturing And Utilization: The Application Of CO2 Artificial Tree for a Net Zero Effect**

**Presenter:** Dr. Ben K.D Asante, Managing Director and CEO, Ghana National Gas Company

#### **Power Generation Through Flare Gas Recovery; Operation Area S, National Iranian Oil Company**

**Presenter:** Ms. Delara Heidari, Oil & Gas Law Expert, Iranian Offshore Engineering and Construction, Iran

#### **Converting Carbon Emissions to Ethanol - A Direct Gasoline Blend: Journey Towards Net Zero**

**Presenter:** Dr. Santhosh Kotni, Manager - Catalysis, Hindustan Petroleum Corporation Ltd., India

#### **HP HiGas Technology - A First-of-its-kind Revolution in Carbon Capture**

**Presenter:** Mr. Annaji Rajiv Kumar Tompala, Chief Manager-R&D, Hindustan Petroleum Corporation Limited, India



## Block 2 Forum 7

### Emission Reduction and Recycling in Refining & Petrochemicals Facilities

The world is in transition to a zero-carbon society toward 2050, and the petroleum refining and petrochemical industries are no exception. For this reason, the petroleum and petrochemical industries must promote the reduction of carbon emissions from plants and the effective use of carbon more strongly than ever before. In this forum, we will discuss the latest information on not only emission reduction by developing new processes and high-performance catalysts, but also material/chemical carbon recycling such as recovery of emitted carbon, reuse of petrochemical products and fuel synthesis by FT and other processes.

#### Forum Chair

Mrs. Nathalie De Muynck, General Manager, Zeeland Refinery, TotalEnergies, Belgium

#### Vice Chairs

Ing. / Dr. Ivan Soucek, Director, Association of Chemical Industry of the Czech Republic, Czech Republic

Dr. Seyed Abdolmajid Khaksar, Deputy Managing Director, Nouri Petrochemical Company, Iran

## Paper Selection

Day 2, Tuesday, 19 September 2023  
10:15 - 11:15 | Auditorium 5

#### Pathways for CO2 Emissions Reduction from Oil Refineries - Understanding Technology Options and Costs

**Presenter:** Mr. Harjinder Sarwara, Senior Consultant, Hatch Ltd., Canada

#### Guilt - Free Operations: Emissions Reduction in Gas-Based Petrochemical Industries

**Presenter:** Ms. Sweta Rani, Chief Manager (Technical Services), GAIL India Limited, India

#### Integrated Production of the Olefins and Jet Fuel from Waste Polypropylene

**Presenter:** Dr. Elena Hajekova, Project Manager, Slovak University of Technology in Bratislava, Slovakia (Slovak Republic)

## Poster Selection

Day 2, Tuesday, 19 September 2023 | 14:15 - 16:00 | Poster Plaza Stage 2

#### Chemical Recycling - The Suitable Option for Circular and Renewable-Based Economy

**Presenter:** Dr. Ivan Souček, Director, Association of Chemical Industry Czech Republic, Czech Republic

#### Integrating Downstream Activities and Waste Management: MOL Group's Experience

**Presenter:** Mr. Robert Hurny, Manager, MOL Group, Hungary

#### Ammonia Recovery from SRU and Utilise in Adjacent Biorefinery Project

**Presenter:** Ms. Geetali Kalita, Deputy General Manager (Technical Services), Numaligarh Refinery Limited, India

#### Gas Flare Recovery and Ammonium Sulfate Fertilizer Production in Nouri Petrochemical Company

**Presenter:** Dr. Sajjad Keshavarzian, Senior Researcher of R&D Department, Nouri Petrochemical Company, Iran

#### Effects of Hydrogen-rich Syngas Addition to Hydrous Ethanol-gasoline Blends on Reducing NOX of SI Engine

**Presenter:** Dr. Ahmed Alharbi, Deputy Director of Energy and Water Research Institute, KACST, Saudi Arabia

#### On-line Assessment of Reforming Catalysts Based on Molecular Management

**Presenter:** Dr. Fang Zheng, Engineer, Petrochemical Research Institute of PetroChina Com Ltd., China

#### A Digital Approach to Reduce Emissions and Optimize Maintenance

**Presenter:** Mr. Ernesto H. Escobedo, Senior Engineer, Data Science CTH, Baker Hughes, Mexico

#### Novel Technology in offering for Valorising waste streams by Capturing & Transforming Carbon in Refinery and Steel plants

**Presenter:** Mr. Vineet Bakshi, Asst. General Manager, Strategy & Business Development, Engineers India Ltd., India

## Block 2 Forum 8

### Cleaner Fuels

In order to achieve climate targets it is necessary to manufacture new fuels with advances in utilization technology and properties corresponding to them. This will include net zero carbon fuels that are offset by other carbon sinks. Biofuels, which have been attracting attention as carbon-neutral fuels in recent years, should also be featured. In this forum, we will discuss the progress of utilization technology, fuel properties and manufacturing technology required by new utilisation technology, leading to net zero targets.

#### Forum Chair

**Mr. Abdullah Al-Osaimi, Manager of Corporate Planning, Kuwait Integrated Petroleum Industries Company, Kuwait**

#### Vice Chair

**Prof. Rong GUO, Professor, SINOPEC Dalian Research Institute of Petroleum and Petrochemicals, China**

**Mr. Balázs Tóth, Biofuel System Trader, MOL Group, Hungary**

## Paper Selection

Day 3, Wednesday, 20 September 2023  
09:15 - 10:15 | Auditorium 5

#### Low Carbon Synthetic Fuels for Ultra Low Tailpipe and Greenhouse Gas Emissions

**Presenter:** Dr. Alexander Voice, Sr. Research Scientist, Aramco Americas, USA

#### A Superior LPG for Improved Performance in Outboard Engines Towards a Green Sustainable Future

**Presenter:** Dr. Sandip Bhowmik, Senior Manager - Analytical & Chemical Synthesis, HPCL, India

#### Hydrogen Free Desulfurization Process with Value Addition of Sulfur Compounds Present in Cutter Stocks

**Presenter:** Dr. Senthilkumar Thangaraj, Assistant Professor, Indian Institute of Petroleum, India

## Poster Selection

Day 3, Wednesday, 20 September 2023 | 14:00 - 15:45 | Poster Plaza Stage 2

#### The Journey of Environmental Friendly Ships' Fuel Production in Indonesia

**Presenter:** Mr. Daniswara Krisna Prabatha, Secondary Unit Process Engineer, PT. Pertamina (Persero), Indonesia

#### Biodiesel Production by Valorizing Waste Olive Oil using Sulfonated Carbon as a Heterogeneous Acid Catalyst

**Presenter:** Dr. Mohammad Algamdi, Associate Research Professor, King Abdulaziz City for Science and Technology, Saudi Arabia

#### Demonstration of Di Methyl Ether (DME)-Diesel Dual Fuel: A Solution Towards De-carbonization

**Presenter:** Mr. Mukul Maheshwari, Chief General Manager I/C (Lube Technology, Indian Oil Corporation Ltd., India

#### Development of Fixed-bed Residue Hydrotreating Technology Adapting for Function Transformation of Refinery

**Presenter:** Mr. Liang Ren, Associate Research Fellow, Sinopec Research Institute Of Petroleum Processing, China

#### Hybridizing Strategies for Green and Blue Hydrogen Production for Indian Refinery - A Case Study

**Presenter:** Mr. Sachin Chugh, Chief Research Manager, Indian Oil Corporation Ltd. (IOCL), India

#### Use of Geothermal Heat Pumps in the Buildings: Case Study: Isfahan, Iran

**Presenter:** Miss Fatemeh Heidari, Master Student, Khaje Nasir Toosi University of Technology, Iran

#### The Plant Fibers as the Template

**Presenter:** Mr. Baoli Ma, PetroChina Daqing Chemical Research Centre of Petrochemical Research Institute, China

#### Maximizing Carbon Utilisation in Conventional Biomass to Liquids Pathways

**Presenter:** Mr. Wessel Nel, Senior Process Engineer, Hatch, Canada

#### Integration of Solar Energy for Refinery & Petrochemical Operations

**Presenter:** Mr. Srivardhan Grandhi, Senior Manager, EIL, India



## Block 2 Forum 9

### Innovation in Products

The goal of further developing a circular economy requires a forward-looking determination of the underlying plastics and their compatibility with this goal in the case of plastic-based and plastic-containing products. Also of growing importance for the future material spectrum will be possible recycling processes (e.g. pyrolysis, hydrogenation, etc) and the development of new polymers. The forum will address both aspects and how they will influence the future product spectrum of the petrochemical industry and their impact on the operation of refineries.

#### Forum Chair

**Dr. Ibrahim Abba**, Head, Technology Commercialization, Technology Oversight & Coordination, Saudi Aramco, Saudi Arabia

#### Vice Chairs

**Dr. Michael Bender**, Research Fellow - Expert Catalysis & Sustainable Value Chains, BASF SE, Germany

**Dr. (Ms.) Ru Xie**, Supervisor, Americas Customer & Application Development, Product Solutions Technology, ExxonMobil, United States

**Mr. Todd Spengeman**, Director Standard Amines & Gas Treatment, BASF Corporation, United States

## Paper Selection

Day 3, Wednesday, 20 September 2023  
11:30- 12:30 | Auditorium 5

#### Bitumen Beyond Combustion - Reprioritizing Bitumen End Use

**Presenter:** Dr. Paolo Bomben, Senior Manager - Clean Technology Development, Alberta Innovates, Canada

#### Packaged Process of Environmentally Friendly Aromatic Rubber Oil for Green Tyres

**Presenter:** Mr. Dongyue Peng, Senior Engineer, Sinopec Research Institute of Petroleum Processing, China

#### Cross Flow Reactor for Hydroprocessing Applications

**Presenter:** Vinod Kumar, Manager (R&D), Bharat Petroleum Corporation Limited, India

## Poster Selection

Day 4, Thursday, 21 September 2023 | 10:00 - 11:45 | Poster Plaza Stage 2

#### Tc2cTm - More Carbon-effective Conversion of Crude Oil into Chemicals

**Presenter:** Dr. Mazin Tamimi, Senior Lab Scientist, Saudi Aramco, Saudi Arabia

#### Valorization of Petroleum Byproducts for E-mobility & Energy Storage Application

**Presenter:** Dr. Malay Pramanik, Manager R&D, Hindustan Petroleum Corporation Limited, India

#### Carbon Products from Bitumen

**Presenter:** Prof. Ian Gates, Professor, University of Calgary, Canada

#### Preparation of Pitch-based Carbon Fiber using Asphaltene and Bitumen Precursors

**Presenter:** Mr. Thomas Kaminski, Researcher, InnoTech Alberta, Canada

#### Oilsands Asphaltenes as Feedstock for Carbon Fiber Production

**Presenter:** Dr. Murray Gray, Senior Technical Advisor, Alberta Innovates, Canada

#### Controlled Polymerization of Acrylamides via Aqueous RDRP

**Presenter:** Dr. Fehaid Alsubaie, Associate Researcher Professor, KACST, Saudi Arabia

#### Innovation in Developing Biodegradable Mulch Films to Address Soil Pollution Issues

**Presenter:** Prof. James Wang, Sinopec Corporate Fellow, Sinopec Shanghai Institute of Petrochemical Technology, China

#### Leveraging Energy Transition to Upgrade Recyclates Value Chain

**Presenter:** Mr. Satyendra Sahai, Chief General Manager, Indian Oil Corporation Limited, India



# BLOCK 3

## TRANSITION IN GAS AND TRANSPORTATION

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**Forum 10** - Smart Infrastructure

**Forum 11** - Innovations in LNG & FLNG for the  
Energy Transition

**Forum 12** - Towards Zero Methane Emissions

**Forum 13** - Hydrogen – Emerging Use, Generation and  
Distribution Networks

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**Day 1, Monday, 18 September 2023 | 10:15 - 11:15 | Auditorium 6**

**BLOCK 3 Keynote Moderator**

**Dr. Abhishek Deshpande**, Vice President: Market Intelligence, ADNOC Group, UAE

**BLOCK 3 Keynote Speaker**

**Dr. Lu Ruquan**, President, CNPC Economics & Technology Research Institute (ETRI), China





## Block 3 Forum 10

### Smart Infrastructure

New strategies and technologies for transport and storage of natural gas will change the availability and affordability of gas, whilst reducing our carbon footprint. Infrastructure developments and integration for pipeline and LNG options are essential to ensure the efficiency of the system, reduce duplicity, diversify sources and increase competitiveness for producers, transit countries and consumers. Shorter term gas infrastructure and storage will play an instrumental role in the transition to new energy sources.

#### Forum Chair

**Mr. David Hardie, Director Liability Management, Alberta Energy Regulator, Canada**

#### Vice Chairs

**Dr. Guosheng Ding, Director, The Underground Gas Storage Department, CNPC Research Institute of Petroleum Exploration & Development, China**

**Mrs. Wasmeya Abdullah Alshammari, Senior Process Engineer, Kuwait National Petroleum Company (KNPC), Kuwait**

## Paper Selection

**Day 1, Monday, 18 September 2023**  
**14:45 - 15:45 | Auditorium 6**

#### The Intermodal Transport of Natural Gas as P-LNG

**Presenter:** Mr. Steven Campbell, CTO, CanaGas Incorporated, Canada

#### Creating Smarter Sites with Industrial - IoT Sensors

**Presenter:** Mr. Thijs Buuron, Technical Lead and Head of Technology, TWTG RD BV, Netherlands

#### Electrical Submersible Pump ESP Optimization using Edge Gate way and Artificial Intelligent Technology

**Presenter:** Mr. Mohamed Farouk Hassan, Senior Petroleum Engineer, Kuwait Oil Company, Kuwait

## Poster Selection

**Day 2, Tuesday, 19 September 2023 | 10:00 - 11:45 | Poster Plaza Stage 3**

#### Application of Formation Pressure Correction Method Considering Multi-well Interference in Inventory Verification of Gas Storage

**Presenter:** Ms. Lina Song, Gas Reservoir Engineer, China National Petroleum Corp. (CNPC), China

#### Artificial Intelligence-based Models for Short-term Natural Gas Consumption Forecasting

**Presenter:** Dr. Jinyuan Liu, Ph.D. Student, Southwest Petroleum University, Canada

#### Asset Management Strategy in Converting LNG Plant to LNG/LPG Hub and Regasification Plant

**Presenter:** Mrs. Grace Intan Melania, Gas & LNG Asset Management Manager, PT Pertamina (Persero), Indonesia

#### Making the Case for Hybrid (dual) Drive Compression Trains in LNG Plants

**Presenter:** Mr. Gautam Chhibber, Director, Proposals, Siemens Energy, USA

#### Natural Gas Consumption Forecasting Based on the Variability of External Meteorological Factors

**Presenter:** Mr. Wojciech Panek, Process Data Engineer, Shell, Poland

#### Dashboard - Technical Services Workflow System

**Presenter:** Ms. Dalal F. Al-Ohali, Petroleum Engineer, Ministry of Oil, Kuwait

#### Digitalization of Terminal Operations to Enable Green Supply Chain

**Presenter:** Mr. Suman Raj, Senior Manager, Hindustan Petroleum Corporation Limited, India

## Block 3 Forum 11

### Innovations in LNG & FLNG for the Energy Transition

Innovative developments in LNG and FLNG are helping to open up new frontiers and make gas more competitive, including its use as a transition fuel. Digitalisation allows for processes to become more efficient and enhanced communications with all customers across the entire value chain. FLNG technology offers countries a more environmentally-sensitive way to develop natural gas resources. As demand increases for conventional uses of LNG, we also expect to see an increase in LNG-driven ships in the coming decade. IMO 2020 has placed a cap on sulphur emissions from ships, and due to low sulfur content requirements, LNG has been highlighted as a viable solution. This forum will look at the future prospects for FLNG development together with the increased use of LNG as a transition fuel.

#### Forum Chair

**Mr. Paul Doucette**, Hydrogen Program Officer, University of Houston, United States

#### Vice Chair

**Prof. Tongwen Shan**, President, Science & Information Technology Dept., Science & Information Technology Dept., China National Offshore Oil Corporation, China

## Paper Selection

Day 2, Tuesday, 19 September 2023  
13:30 - 14:30 | Auditorium 6

#### Transitioning Kazakhstan's Transportation Fuel with 'localized' LNG

**Presenter:** Mr. Don Streu, President and CEO, Condor Energies, Canada

#### LGN Generation Power Ship Market and Preliminary Scheme Research

**Presenter:** Ms. Yadi Qin, Gas Power Generation Engineer, CNOOC, China

#### A Success Story: Intelligence in Molecular Sieve Beds Desiccant Online Change Out

**Presenter:** Mr. Nasser Ahmed Al-Saei, Operations Coordinator, QatarGas Company Ltd., Qatar

## Poster Selection

Day 3, Wednesday, 20 September 2023 | 10:15 - 12:00 | Poster Plaza Stage 3

#### Carbon-neutral LNG: The Future of Gas Markets?

**Presenter:** Ms. Zlata Sergeeva, Senior Analyst, King Abdullah Petroleum Studies and Research Center (KAPSARC), Saudi Arabia

#### H2, Natural Gas & NGLS: An Imperative for Shaping India's Future

**Presenter:** Mr. Satyabrata Biswas, General Manager, Strategy & Business Development, Engineers India Ltd., India

#### How Reliable and Auditable Technology Supports the Complexities of LNG in the Energy Transition

**Presenter:** Mr. Erik Winn, Director Midstream, Quorum Software, USA

#### A Comparative Study on Types of Vaporisers in LNG Receiving Terminals

**Presenter:** Dr. Huiyong Xue, Senior Engineer, PetroChina Planning and Engineering Institute, China

#### Helping the Energy Transition with Type-4 P-LNG Storage and Transport

**Presenter:** Mr. Steven Campbell, CTO, CanaGas Incorporated, Canada



## Block 3 Forum 12

### Towards Zero Methane Emissions

This forum will focus on the ways towards zero methane emissions, including overview of the general pictures of global methane emissions from various sources, monitoring, treatment and prevention technologies, best practices, innovations and advanced technologies solutions such as; imaging, sensors, robotics, UAV, AI, among others, government regulations and industry roadmap.

#### Forum Chair

**Dr. Antonio Lopez-Rodriguez**, Head of Energy Transition and Climate Change, Repsol, Spain

#### Vice Chairs

**Dr. Viktoria Kardosne**, Green Transition Office Manager FGSZ Ltd., Hungary

**Dr. Soheil Asgarpour**, President & CEO, Petroleum Technology Alliance Canada, Canada

## Paper Selection

Day 3, Wednesday, 20 September 2023  
09:15 - 10:15 | Auditorium 6

#### Building Technology Capacity to Reduce Hydrocarbon Sector's Methane Emissions by 90% by 2030

**Presenter:** Dr. Soheil Asgarpour, President & CEO, PTAC, Canada

#### Optimizing Cost of Methane Mitigation and Safety in Leak Detection and Repair

**Presenter:** Dr. Thomas Fox, President, Highwood Emissions Management, Canada

#### Production to Distribution: Methodology for Measurement Informed Methane Emission Estimates and Verification

**Presenter:** Ms. Amanda Harmon, Senior Manager, Programs, GTI Energy, USA

#### Advanced Technologies for Recovering Flared Gas at Petroleum Development Oman South Fields

**Presenter:** Mr. Saif Al-Humaimi, Concept Process Engineer, Petroleum Development Oman, Oman

## Poster Selection

Day 3, Wednesday, 20 September 2023 | 14:00 - 15:45 | Poster Plaza Stage 3

#### The Emissions Testing Centre Lab: Case Studies Towards Zero Methane Emissions

**Presenter:** Ms. Nicole Calma, Research Technician, University of Calgary, Canada

#### Data Analytics of Satellite and Aircraft Platforms Towards Zero Methane Emissions in the Oil & Gas Sector

**Presenter:** Mr. Nicholas Flanagan-Bergeron, Account Executive, O&G, GHGSat, Canada

#### Measurement and Analysis of Methane Emissions in 11 Oil & Gas Production Regions in Alberta

**Presenter:** Ms. Katlyn MacKay, Post-Doctoral Fellow, Environmental Defense Fund, Canada

#### Paradigm Shift in Low-cost Optical Sensing Maximizing Cost-to-performance for Monitoring Methane Emissions with Continuous Monitors

**Presenter:** Mr. Ryan Fitzpatrick, Sales Director, Americas, Sensirion Connected Solutions Inc., United States

#### Life Cycle Analysis - Understanding Emissions Across the Value Chain to Achieve True Net - Zero

**Presenter:** Ms. Zainab Dadashi, Director, Climate Risk, Modern West Advisory, Canada

#### Optimisation and Location of Methane Micro-emission at Gas Stations Based on the TDLAS Gas Detectors

**Presenter:** Dr. Fei Xiao, Postdoctoral, Southwest Oil & Gas Field Company, PetroChina, China

#### Steps Taken at Gail India Ltd. Vaghodia for Eliminating Methane Emissions

**Presenter:** Mr. Pradeep Velambaran, Manager, Gail India Ltd., India

#### Flares & Venting

**Presenter:** Mr. Concetto Fischetti, Energy Transition Director, IOGP, UK

## Block 3 Forum 13

### Hydrogen – Emerging Use, Generation, and Distribution Networks

The use of hydrogen in transportation and stationery power supply is free of on-board carbon emission and offers an alternative climate change solution. This forum will present use cases, efficient and innovative generation processes, distribution and transportation. The forum will also discuss production pathways comparing their environmental and economic impacts and demonstrate viable technology solutions for the distribution and storage challenges of the tiny molecules.

#### Forum Chair

**Dr. David Layzell**, Director, Canadian Energy Systems Analysis Research, University of Calgary, Canada

#### Vice Chairs

**Mr. Osamu Ikeda**, Deputy General Manager, Hydrogen Business Department, Section Leader, Business Development Section, Frontier Business Division Chiyoda Corporation, Japan/Netherlands

## Paper Selection

Day 3, Wednesday, 20 September 2023  
11:30 - 12:30 | Auditorium 6

#### Kickstarting the Low Carbon Hydrogen Market: Scaling a Market That Does Not (yet) Exist?

**Presenter:** Mr. Tarek Helmi, Partner, Future of Energy Lead, Deloitte, Netherlands

#### Unlocking Bulk Hydrogen Production, Storage, and Transport Through Learnings from Real-life UK Trials

**Presenter:** Mr. Patrick Swinburne, Hydrogen Projects and Operations Lead, Baringa, USA

#### Hydrogen Vehicle Demonstrations

**Presenter:** Ms. Terri Johnson, Program Manager, Research and Innovation Program Manager, Research and Innovation, Alberta Motor Transport Association (AMTA), Canada

## Poster Selection

Day 4, Thursday, 21 September 2023 | 10:00 - 11:45 | Poster Plaza Stage 3

#### Developments in Turquoise Hydrogen and Roadmap Towards Commercial Adoption

**Presenter:** Ms. Lily So, Process Engineer, Innovation, Hatch Ltd, Canada

#### Spera Hydrogentm System for Massive H2 Storage and Transportation Using MCH-LOCH

**Presenter:** Mr. Yoshimi Okada, Fellow, Frontier Business Division, Chiyoda Corporation, Japan

#### Techno-economic-environmental Assessment of Centralized Versus Distributed Hydrogen Production to Support Heavy-duty Vehicle Fueling in Canada

**Presenter:** Mr. Hadi Shaker Shiran, Energy Systems Analyst, University of Alberta, Canada

#### Hydrogen Storage in Oman

**Presenter:** Mr. Al Mohanad Al Mahrouqi, Associate Production Technologist, Gulf Energy, Oman

#### Future for Hydrogen in Traditional Natural Gas Transportation & Storage Systems: A Study of Central Europe

**Presenter:** Mr. Jiří Gavor, Partner, ENA, Czech Republic

#### North American Hydrogen Highway

**Presenter:** Mr. Jorge Wimbirt, Head of Canadian Energy Supply & Infrastructure, Nikola Corporation, USA

#### Pathways to Net-zero Heating in Edmonton Region: Electrification Vs. Hydrogen

**Presenter:** Mr. Brodie Chalmers, Manager, Hydrogen System Planning, ATCO, Canada





# BLOCK 4

## LEADERSHIP CHALLENGES IN TRANSITION

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**Forum 14** - Safety & Risk Management

**Forum 15** - Cybersecurity

**Forum 16** - Future Skills for an Evolving Workforce in  
the Energy Transition

**Forum 17** - Innovation & Partnerships in Supply Chains

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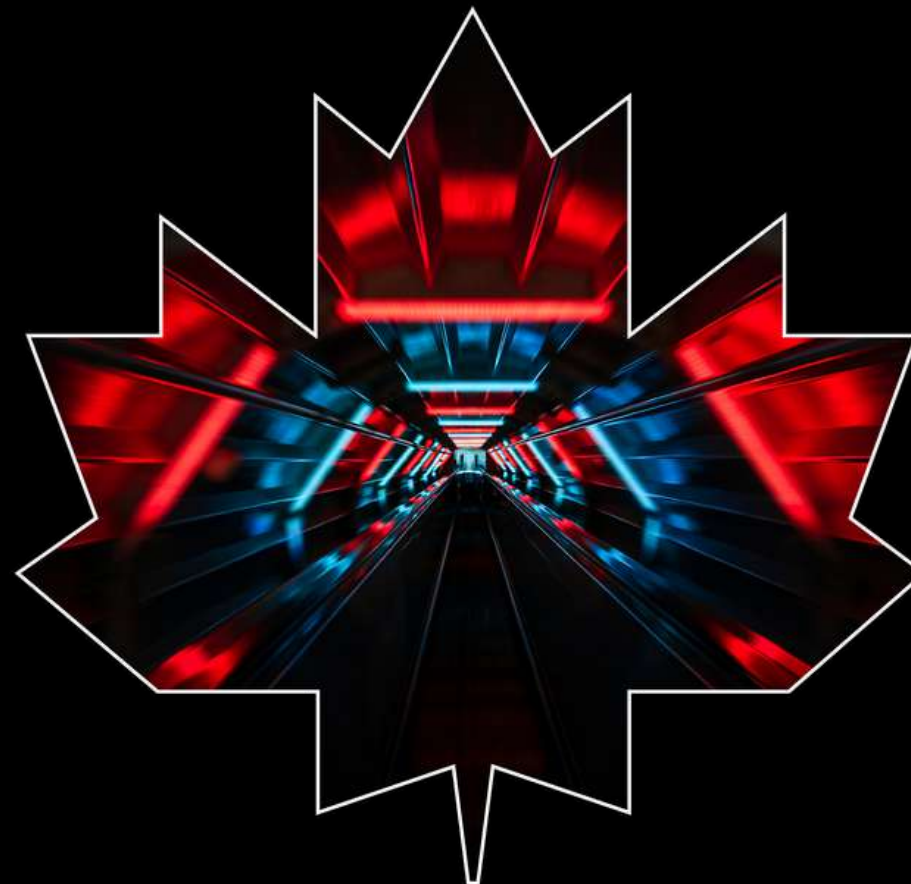
**Day 1, Monday, 18 September 2023 | 14:45 - 15:45 | Auditorium 3**

**BLOCK 4 Keynote Moderator**

**David Curtiss, Executive Director, American Association of Petroleum Geologists, USA**

**BLOCK 4 Keynote Speaker**

**Mr. Lars Benjamin Vold, Managing Director, NORMA Cyber, Norway**



## Block 4 Forum 14

### Safety & Risk Management

Safety of the people, assets and environment has always been and will continue to be the focus of the industry. Assessment of all the risks and uncertainties and the development of practical strategies is necessary to ensure highest safety standards and risk minimisation and mitigation. Achieving those objectives are dependent on training, quality data and robust workflow processes and robust and reliable procedures in place to identify, evaluate and address the broad variety of risks inherent in the oil and gas industry. In this forum we will look at best practices, increasing adaptation of innovation in technology, and strategies as requirements for highest level of safety and successful risk management as part of a good governance.

#### Forum Chair

**Mr. Hans Kristian Danielsen, Senior Vice President, Business Development and Sales Enablement Director, DNV, Norway**

#### Vice Chairs

**Mr. Ashraf Al-Rashdi, Superintendent, EH&S, Saudi Arabian Chevron, Saudi Arabia**

**Prof. Weidong Du, Vice President, CNPC Research Institute of Safety & Environment Technology (RISE), China**

## Paper Selection

**Day 2, Tuesday, 19 September 2023**  
**10:15 - 11:15 | Auditorium 6**

#### Optimization and Upgrade of CNPC HSE & Risk Management Based on 4 Key Elements

**Presenter:** Dr. Huiyuan Li, HSE Engineer, CNPC Rise, China

#### Identifying Potential Factors to Help Mitigate and Avoid Risks in Oil & Gas Projects

**Presenter:** Mrs. Caryn Fuller, Partner, HKA Global, USA

#### Digital Innovation to Simplify and Manage Risk Analysis Studies with Ease

**Presenter:** Mr. Girish Hingorani, Technical Account Executive, Cenosco BV, Canada

## Poster Selection

**Day 2, Tuesday, 19 September 2023 | 14:15 - 16:00 | Poster Plaza Stage 4**

#### Effective Risk Management by Leveraging Technology - A Case Study ONGC

**Presenter:** Mr. Amit Kumar, Chief Risk Officer, Oil & Natural Gas Corporation Ltd India, India

#### Safety & Risk Management in Oil Pipelines

**Presenter:** Ms. Vicki Knott, CEO, CruxOCM, Canada

#### Center for Offshore Safety Efforts to Advance Offshore Safety

**Presenter:** Mr. Russell Holmes, Senior Director, Center for Offshore Safety, API, USA

#### Investment Challenges Affecting the Oil and Gas Industry

**Presenter:** Mr. Julio Arboleda, Fellow, Oil and Gas Program, King Abdulla Petroleum Studies and Research Center, Saudi Arabia

#### Drones for Inspection and Maintenance Applications

##### Presenters:

**Mr. Brian Binoy**, Engineer, Aramco Americas, USA

**Mr. Basem Khoj**, Quality Consultant, Aramco Americas, USA

#### Digital Innovation to Simplify and Manage Risk Analysis Studies with Ease

**Presenter:** Mr. Girish Hingorani, Technical Account Executive, Cenosco BV, Canada

#### Identifying Potential Factors to Help Mitigate and Avoid Risks in Oil & Gas Projects

**Presenter:** Mrs. Caryn Fuller, Partner, HKA Global, USA



# Block 4 Forum 15

## Cybersecurity

The industrial world is becoming more digitally connected, resulting in smarter and more productive operations. With the increasing amount of data, internet-connected devices and automation, cybersecurity is a higher priority than ever. Being the largest industry in the world, oil and gas companies are a major target for cyberattacks. No organisation, regardless of size or industry, is immune to cyberattacks, and just one breach could cause significant catastrophic/safety financial, reputational or regulatory consequences. So, today's oil and gas industry needs more innovative and efficient ways to maintain security. This session will present how the oil and gas industry maintains safety, efficiency and capitalises on innovative, cost-saving technologies and big data without compromising security, operations and the environment.

### Forum Chair

**Ms. Catherine Loughlean, Principal Director, Canada National Resources Security Lead Accenture Security, Canada**

### Vice Chairs

**Mr. Jean-Emmanuel Bieber, Principal Cybersecurity Officer, Siemens Energy, Grid Technologies, Norway**

**Mr. Javier Garcia Quintela, Chief Information Security Officer (CISO), Repsol, Spain**

## Paper Selection

**Day 2, Tuesday, 19 September 2023**  
**13:30 - 14:30 | Auditorium 5**

### The Challenges of Regulating Cyber Security in the Oil & Natural Gas Industry

**Presenter:** Ms. Suzanne Lemieux, Director, Operations Security & Emergency Response Policy, API, USA

### Business Recovery Based on Value Chain

**Presenter:** Mr. Lars Idland, VP Security - CISO, Equinor ASA, Norway

### Cyber Security - Road Ahead for Oil & Gas

**Presenter:** Mr. Parveen Kumar Yadav, Senior Manager – IS (Governance and Compliance), Hindustan Petroleum Corporation Limited, India

### Pertamina Cybersecurity: A Journey from Zero to Hero

#### Presenters:

**Mrs. Fitria Lisdiyanti**, Assistant Manager, PT Pertamina (Persero)

**Mr. Ahmad Firdaus**, Sr. Analyst, Pertamina (Persero), Indonesia

## Poster Selection

**Day 3, Wednesday, 20 September 2023 | 10:15 - 12:00 | Poster Plaza Stage 4**

### OT Cybersecurity: Transformation as a Business Enabler

**Presenter:** Mr. Justin Pauler, OT Cybersecurity SME, Booz Allen Hamilton, USA

### 6 Months to 6 Minutes: Real-World Incident Response Strategies to Reduce OT Cyber Impacts

**Presenter:** Mr. Bryan Singer, Principal Director - OT Incident Response, Accenture, USA

### Reshaping Information Security Strategies: Challenges for Oil & Gas Sector in Contemporary and Post-Quantum Era

**Presenter:** Ms. Sanchali Nag, Senior Manager (Customer Digital Solutions) Retail, Bharat Petroleum Corporation Ltd., India

### Modernising Critical Infrastructure Cybersecurity to Withstand Today's Cyberthreats: The Core Strategies & Technologies

**Presenter:** Mr. Morey Haber, Chief Security Officer, BeyondTrust, USA

### Secure Lifecycle the ISA/IEC 62443 Way

**Presenter:** Mr. Christopher Fitzhugh, Principal ICS Security Consultant, Siemens Energy, Norway

### Pertamina Cybersecurity: A Journey from Zero to Hero

#### Presenters:

**Mrs. Fitria Lisdiyanti**, Assistant Manager, PT Pertamina (Persero)

**Mr. Ahmad Firdaus**, Sr. Analyst, Pertamina (Persero), Indonesia

## Block 4 Forum 16

### Future Skills for an Evolving Workforce in the Energy Transition

The new requirements and challenges facing the oil and gas industry, have become a major challenge for managers and employees in the oil and gas industry. The energy transitions and new product trends, as well as evolving employee expectations, are prompting our industry to reimagine the make up and performance of their workforces. Environmental responsibility, sensitivity to innovation and teamwork are coming to the forefront. The rapid development of technology dictates the need for new approaches to training and retraining, closer and more effective interaction between educational centers and the industry. The forum discusses some of the best practices and solutions to recruiting and retaining the best talent for the industry.

#### Forum Chair

**Mrs. Sigrid Borthen Toven, Vice President, Subsurface Competence Center, Equinor, Norway**

#### Vice Chairs

**Ms. Momoyo Yuki, Senior Manager, Japan Petroleum Exploration, Japan**

**Mr. Walter Hufford, Vice President, North America Government and Regulatory Affairs, Repsol, United States**

## Paper Selection

**Day 3, Wednesday, 20 September 2023**  
**09:15 - 10:15 | Auditorium 4**

#### The IBP Youth Committee and its Role in Building Bridges in the Brazilian Oil Industry

**Presenter:** Ms. Patricia Carneiro dos Santos, Manager, Petrobras, Brazil

#### The Energy Transition as a Catalyst for Workforce Development

**Presenter:** Mr. John Bolakas, Project Director and Energy Executive, Environmental Standards, USA

#### What Does it Take to Shape the Future of Energy?

**Presenter:** Ms. Karen Vorraa, Vice President, People, Culture and Performance, Equinor, Norway

#### Talent Development: Challenges and Opportunities in the Era of Energy Transition

**Presenter:** Mr. Riyadh Ali Al-Enezi, Team Leader-Technical Personnel Development Team, Kuwait Oil Company, Kuwait

## Poster Selection

**Day 3, Wednesday, 20 September 2023 | 14:00 - 15:45 | Poster Plaza Stage 4**

#### Future of Work and Skills for the Oil & Natural Gas Industry

**Presenter:** Mrs. Rebecca Winkel, Senior Policy Advisor, API - American Petroleum Institute, USA

#### Citizen Developers - Empowering Innovation and Accelerating Digital Transformation

**Presenter:** Ms. Hadla Alfedaghi, Senior IT Infrastructure Engineer, KIPIC, Kuwait

#### Successfully Transitioning the Workforce to a Cleaner, Greener Future

**Presenter:** Mr. Eswar Jayaram, Analyst, Hatch Ltd., Canada

#### Developing Future Ready Workforce amid Imminent Energy Transition

**Presenter:** Mr. Kapil Gakhar, Chief Manager - HR, Hindustan Petroleum Corporation Limited (HPCL), India

#### Leadership & Culture Change 30, 300, 3000: Creating Talent to Value for NRE Business

**Presenter:** Ms. Mangaranap Rabehka Nathalia, Senior Analyst Human Capital Planning & Evaluation, Pertamina Persero, Indonesia

#### Organizational Innovation and Leadership in the Digital Economy

**Presenter:** Ms. Jiaonan Han, Senior Engineer, Kunlun Shuzhi Technology Co. Ltd., China

#### Modernising Working Energy

**Presenter:** Ms. Gurpreet Lail, President and CEO, Enserva, Canada

#### Exploring Future Opportunities For The Next Oil And Gas Generation

**Presenter:** Ms. Ulrike Schopp, Chief of Staff, Ipieca, UK



## Block 4 Forum 17

### Innovation & Partnerships in Supply Chains

Sustainable, reliable, secure and cost-effective supply of materials, equipment, technology and services is critical for the oil and gas industry. The greening of the supply chain can promote sustainability and transparency. Relationships between sustainability and value creation will be a key issue to be tackled over the long term resulting in new business relationships with demonstrable sustainable strategies. Sustainable procurement considers the whole life cost of goods through Life Cycle Assessment, to ensure it is economical in a comprehensive manner rather than basing decisions primarily on price, quality and time. The forum will also look at new local content policies which are being introduced in many countries adding complexity and creating new business models for the oil and gas industry to secure the supply of energy required for the next decades.

#### Forum Chair

**Mr. Ahmed AlZahrani**, Director, Industrial Development & Strategic Supply Department, Saudi Aramco, Saudi Arabia

#### Vice Chair

**Dr. Duan Zhaofang**, Director, Natural Gas Research, CNPC Economics & Technology Research Institute, China

## Paper Selection

Day 3, Wednesday, 20 September 2023  
16:15- 17:15 | Auditorium 5

#### Supply Chain Innovation & Sustainable Value Creation

**Presenter:** Mr. Henry Stoch, Partner Sustainability, Deloitte, Canada

#### Embedding ESG in Oil & Gas Supply Chains

**Presenter:** Mr. P.S. Murty, Executive Director - HSE (Corporate), Hindustan Petroleum Corporation Limited, India

#### A Green Supply Chain Integrated with Refinery & Petrochemical Complexes - A Novel Approach

**Presenter:** Mr. Srivardhan Grandi, Senior Manager, EIL, India

## Poster Selection

Day 4, Thursday, 21 September 2023 | 10:00 - 11:45 | Poster Plaza Stage 4

#### How Sustainable Procurement Can Help Oil & Gas Companies Reduce Scope 3 GHG Emissions

**Presenter:** Ms. Jane Zhang, Co-CEO and Co-Founder, ETCH Sourcing, Canada

#### Decarbonizing the Full LNG Production Value Chain

**Presenter:** Mr. Iain Fraser, Engineering Consultant Oil & Gas, Hatch Ltd., Canada

#### Greening of Energy Supply Chain with Bioethanol in Sustainable Model

**Presenter:** Ms. Geetali Kalita, Head ESG, Numaligarh Refinery Ltd., India

#### Leading Chevron's Supply Chain Decarbonization by Partnering Differently

**Presenter:** Maru Williams, Chevron Global Upstream - Supply Chain General Manager Chevron, USA

#### Greening of Supply Chains

**Presenter:** Scott Mitchell, Engagement Manager, Climate Change, Hatch Ltd., Canada

#### Study of Forecasting and Estimation Methodology of Oilfield Development Cost Based on Machine Learning

**Presenter:** Mingyu SHI, Senior Engineer, R&D Department, China National Petroleum Corporation, China

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