



IEF Roundtable on Building Carbon Management and Hydrogen Markets

International Energy Forum Headquarters, 26 November 2025

Amr Aldamri Street - Circle 6 Diplomatic Quarter Riyadh Saudi Arabia

Building Carbon Management and Hydrogen Markets

(Co-hosted with the IEF Seminar on Energy Market Transparency and JODI, 25 November)

Introduction

IEF governments, industry leaders, and innovators must turn ambitious pledges into reality to create the **carbon management and hydrogen markets** they envision. Dialogue on policy frameworks, incentives, innovation, and data must be at the very heart of attracting the investment needed to scale these pivotal transition technologies across global energy markets.

The IEF Roundtable on Building Carbon Management and Hydrogen Markets invites IEF government and industry thought leaders to take stock and reinforce pathways for the affordable, secure, and sustainable deployment of carbon and hydrogen value chains. Building on recent IEF dialogue findings on “Hydrogen Market Pathways” and “Building Markets to Scale Carbon Management Solutions” the roundtable is co hosted with the Japan Organization for Metals and Energy Security and aims to help accelerate market momentum also by advancing the outcomes of the recently convened IEF-EU Energy and Climate Day, and IEF Industry Advisory Council.

Since the IEF published its seminal Report on Strategies to Scale Carbon Capture use and Storage in 2021, urging governments to Greenlight CCUS “to achieve climate goals without losing sight of energy market stability and affordability” its findings resonate evenmore with current market realities that place energy security and affordable energy access closer at the center of energy and climate policy frameworks and industry strategies.

The benefit of far greater government support is reflected in a substantial proliferation of carbon management projects, start-ups, and patents announced after 2020, concentrated in North America, Europe, the Middle East, and Asia. Capacity may reach 1Gt of CO₂ of annual removals by 2030 in line with the Carbon Management Challenge agreed at COP28 in 2023.

Clean hydrogen is also advancing, supported by record public and private investment, innovation, and the emergence of cross-sectoral value chains. Successful first movers and dedicated clusters—notably in the GCC North-West Europe, Asia and the US—demonstrate the potential of Circular Carbon Economy frameworks and clean hydrogen to match deep decarbonization with energy security and affordable energy access goals.

Yet, these clean technology breakthroughs spearheaded by governments and incumbents remain exposed to persistent market gaps, cost, regulatory hurdles, and other challenges. Investment activity lags and has yet to match announced policy ambitions with carbon markets and hydrogen trade still nascent and hampered by fragmented policies, high capture and capital costs, supply chain issues and a lack of demand and data.

As global energy demand soars and governments struggle to balance near-term energy security, affordability, and competitiveness with long-term goals, the need for dialogue and concerted action has become even more pressing. Building global carbon management and hydrogen markets that attract the private sector investment and capital market support they need to thrive on their own momentum will help ease fiscal constraints and reduce the cost of clean and reliable energy for consumers.

Objectives

The roundtable will focus on the policy frameworks and regulatory incentives, industry initiatives and technology innovations and the carbon and hydrogen market data that is required for the accelerated roll out of carbon management and hydrogen value chains. Dialogue on the policy, technology, and data enablers needed to push market development forward are structured in four sessions:

Overview

1. **Carbon Management and Hydrogen Market Advances – Policy & Industry Signposts**
Cohesive policy and regulatory frameworks that reduce barriers for industry initiatives, attract private capital and scale technology deployment.
2. **Innovation and Technology Readiness – Building Scale & Patenting Breakthroughs**
Fostering high-integrity state-of-the-art carbon management and hydrogen value chains; evolving business models and technologies that deliver on affordability, reliability, and sustainability.
3. **Market Transparency – Data for Financing and Investment**
Making use of transparent, accessible data to facilitate and underpin investment decisions, scale up innovation, and mitigate risks across markets and industries.
4. **Driving Global Collaboration**
Concluding remarks to summarize shared insights and help align efforts among all stakeholders.

By convening government policymakers, industry leaders, innovators, and experts from IEF's global network, the roundtable will provide a unique platform to bridge perspectives and shape collective solutions to build new markets.

Held under the Chatham House Rule, alongside the concurrent IEF Seminar on Energy Market Transparency, both meetings will further assist to uncover synergies and amplify producer-consumer efforts.

Key Questions

1. What policy frameworks have proven most effective at enabling carbon and hydrogen market growth?
2. How can existing regulatory incentive models be scaled or adapted for global markets?
3. What lessons can be drawn from leaders in CCUS and hydrogen deployment?
4. How can we ensure integration of energy security, affordability, and decarbonization in carbon management and hydrogen market-building?
5. What are the most promising technological breakthroughs in CCUS and hydrogen?
6. How can pathways to scale be accelerated beyond isolated FOAK projects to replication and clusters?
7. What role do startups and industrial clusters play in de-risking innovation?
8. How can venture capital, industry, and public-private partnerships drive early-stage and large-scale deployment?
9. How can market and regulatory data be improved to support private investment?
10. What are the best practices in measurement, reporting, and verification (MRV) for CCUS and hydrogen, and how can these be standardized?
11. What data gaps impede the development of carbon and hydrogen markets today?
12. How can JODI, the IEF, and partner organizations enable greater market transparency?

Draft Agenda*

09:00 to 09:10	Welcome and opening Eng. Jassim Alshirawi , Secretary General, International Energy Forum (IEF)
09:10 to 09:30	Scene-Setting Keynote Remarks – Musaab Almulla, Vice President, Energy & Economic Insights in Strategy & Marketing Analysis, Saudi Aramco – Koji Yamamoto, Chief Technology Officer, Japan Organization for Metals and Energy Security (JOGMEC)
09:30 to 11:00	Session 1: Carbon Management and Hydrogen Market Advances – Policy & Industry Signposts This opening session sets the stage by reviewing global progress on policy frameworks, regulatory signals, and major industry milestones. The focus will be on strategies that have enabled rapid deployment in leading jurisdictions, challenges encountered, and what it takes to scale up to meet energy security and sustainability objectives. Moderator: Spyros Kouvelis , Team Leader EU-GCC Cooperation on Green Transition Speakers: – H.E. Hans Peter van der Woude, Ambassador of the Kingdom of the Netherlands to the Kingdom of Saudi Arabia – Khaled Al-Deyain, Assistant Undersecretary of Technical Affairs, Ministry of Oil, Kuwait – Mohammad Alrashidi, Director of Energy, Gulf Cooperation Council Secretariat – Sjur E. Bratland, Director - Hydrocarbon & Emission Solutions, Norwegian Energy Partners* – Luca Ventrino, Member of the Technical Secretariat of the Department of Energy, Ministry of Environment and Energy Security, Italy – Ibraheem AlShankiti, Advisor, Ministry of Energy, Saudi Arabia Key Questions for Roundtable Discussions – What policy frameworks have proven most effective at enabling carbon and hydrogen market growth? – How can existing regulatory/incentive models be internationalized or adapted for global markets? – What lessons can be drawn from leaders in CCUS and hydrogen deployment? – How can we ensure integration of energy security, affordability, and decarbonization in market-building for secure and sustainable energy systems transformations?
11:00 to 11:30	Networking Break and Group Photo

Continues next page

11:30 to 13:00

Session 2: Innovation and Technology Readiness – Building Scale & Patenting Breakthroughs

This session will review and discuss the advancement of clean technologies new innovations and breakthroughs—from advanced capture, DAC, and storage to current and next-generation hydrogen production to related cross-border infrastructure development and collaboration. It will also spotlight the vital role of startups, partnerships, and innovative business and financing models to overcome commercialization barriers.

Moderator: Ali Alsamawi, Senior Energy Analyst, IEF

Speakers:

- **Waleed Al Shalfan**, Vice President, SABIC
- **Hassan Al-Mulla**, Vice President - Group NES Program Implementation, Bapco Energies, Bahrain
- **Hesham Tashkandi**, CEO, ACWA Power, Saudi Arabia
- **Ayla Majid**, Founder and CEO, Planetive
- **Mohammad Abu Zahra**, Chief Regional Officer - MEA, Global CCS Institute
- **Louy Qoaidar**, Head of H₂-diplo Office, Saudi Arabia

Key Questions for Roundtable Discussions

1. What are the most promising technological breakthroughs in CCUS and hydrogen?
2. How can pathways to scale be accelerated beyond isolated FOAK projects to replication and clusters?
3. What role do startups and industrial clusters play in de-risking innovation?
4. How can venture capital, industry, and public-private partnerships drive early-stage and large-scale deployment?

13:00 to 14:30

Lunch and Bilateral Meetings

14:30 to 16:00

Session 3: Market Transparency –Data for Financing and Investment

Reliable, harmonized, and transparent data is the backbone for bankable carbon management and hydrogen projects to create reliable markets. This session will explore data transparency requirements for carbon and hydrogen markets to grow and function well, including robust Measurement Reporting and Verification (MRV) standards, and data sharing systems—addressing what regulators, investors, and innovators need to build the confidence and predictability that unlocks private sector investment and financing.

Moderator: Christof van Agt Ross, IEF Director of Dialogue

Speakers:

- **Christina Deligianni**, CEO & Co-Founder, Verimarket, Policy & Programs Director at the Institute for Sustainable Development, ISD, EPLO
- **Ichiro Kutani**, Senior Research Director, Manager, Global Energy Group1, Director, Energy Security Unit, IEEJ
- **Duncan Millard**, Senior International Statistics and Energy Advisor
- **Julian Prime**, Head of Statistics, IRENA
-

- **Erik Rakhou**, Energy Advisory Founder & Director, Hydrogen Investor, Rakhou Associates
- **Mauricio Bermudez Neubauer**, Partner, Ernst and Young, Climate Change and Sustainability Services

Key Questions for Roundtable Discussions

5. How can market and regulatory data be improved to support private sector investment?
6. What are the best practices in measurement, reporting, and verification (MRV) for CCUS and hydrogen, and how can these be standardized?
7. What data gaps impede the development of carbon and hydrogen markets today?
8. How can JODI, the IEF, and partner organizations enable greater market transparency?

ENDS