

Facilitating Nigeria's Energy Transition through CCUS Development

Capacity building virtual workshop

10 September 2021

10:00-12:00 WAT/11:00-13:00 CET

Partners:



International
Energy Agency

iea

Background

As the source of around three-quarters of greenhouse gas emissions today, the energy sector holds the key to averting the worse effects of climate change. Transitioning the global energy sector to net-zero carbon dioxide (CO₂) emissions by 2050 will require a complete transformation of how we produce, transport and consume energy - underpinned by an unprecedented deployment of clean technologies including carbon capture, utilisation and storage (CCUS). CCUS technologies will play a critical role in supporting energy transitions globally and can contribute to emissions reductions across a range of sectors and applications, from power and heavy industry to low-carbon hydrogen production and carbon removal. In the [IEA Net Zero 2050 Roadmap](#), CCUS deployment scales from around 40 MtCO₂/year capture today to more than 1.6 GtCO₂/year by 2030 and 7.6 GtCO₂ by 2050.

The Federal Government of Nigeria (FGN) has identified CCUS as a key technology to support Nigeria's energy transition and climate targets. CCUS can underpin a long-term role for natural gas in meeting Nigeria's economic development and energy security goals. CCUS can also support the decarbonisation of Nigeria's industrial sector along with opening new domestic markets and export opportunities for Nigeria's gas resources, including through low-carbon hydrogen production.

Recognising the strategic value of CCUS in Nigeria, the IEA is working with the Office of the Vice President of Nigeria (OVP) to build CCUS capacity and identify near-term needs and opportunities for CCUS development and deployment consistent with the country's energy transition. This joint workshop will bring together Nigerian and international experts to identify and discuss key opportunities, barriers, and needs for CCUS in Nigeria.

Agenda

- 10:00-10:10 (WAT) **Welcome and introductions**
- 11:00-11:10 (CET) **Ambassador Mary Warlick**, Deputy Executive Director, International Energy Agency
- Ambassador Adeyemi Dipeolu PhD**, Special Adviser to the President on Economic Matters in the Office of the Vice President of the Federal Republic of Nigeria

10:10-10:30 (WAT) **Session 1: Potential for CCUS globally and in Nigeria**

11:10-11:30 (CET) Presentations:

- Global perspectives on CCUS, **Samantha McCulloch**, Head of CCUS Unit, IEA
- The strategic context for CCUS in Nigeria, **Victor Richard Osu PhD**, Energy Transition and Environment Expert, LPG Expansion Programme, Office of the Vice President

10:30-11:10 (WAT)

Session 2: CCUS technologies and developments

11:30-12:10 (CET)

Moderator: **Stig Svenningsen**, Deputy General Director, The Norwegian Ministry of Petroleum and Energy

Some CCUS technologies have been used commercially since the 1970s, however the maturity of CCUS varies considerably by technology type and application. This session will focus on the current status of CCUS technologies and international insights on CCUS development and deployment.

Presentations:

- Current status of CCUS technologies, **Tim Dixon**, General Manager, IEAGHG
- Case Study: South Africa's efforts to develop CCUS, **David Khoza PhD**, Executive Manager: Integrated Geoscience Development, Council for Geosciences, South Africa

Q&As session (10 mins)

11:10-11:55 (WAT)

Session 3: Near-term needs and opportunities for CCUS in Nigeria

12:10-12:55 (CET)

Moderator: **Victor Richard Osu PhD**, Energy Transition and Environment Expert, LPG Expansion Programme, Office of the Vice President

With a large oil and gas sector, Nigeria has strong prospects for CO₂ storage in depleted oil and gas reservoirs as well as in deep saline aquifers. However, as in many countries, further work is required to identify and develop CO₂ storage resources to a level that can support investment. The establishment of legal and regulatory frameworks for CCUS will also be important to ensure safe and secure CO₂ storage, while international collaboration will be central to building capacity and accelerating efforts to develop and deploy CCUS in Nigeria.

This session will be a panel discussion on the near-term needs and opportunities for CCUS in Nigeria and how CCUS fits into Nigeria's broader energy transition strategy.

- **Felicia Chiwe Mogo, PhD**, Principal Environmental Consultant to Lubari Maritime Services, Founder and President, African Maritime Environment Sustainability Initiative
- **Iain Macdonald**, CCUS Workstream Lead, Oil and Gas Climate Initiative
- **Brendan Beck**, Senior Energy Consultant, World Bank

Discussion

- *What are the main opportunities and challenges for CCUS deployment in Nigeria?*
- *What sectors could be first movers for CCUS in Nigeria?*
- *What role can the private sector play to stimulate the development and deployment of CCUS in Nigeria?*
- *What are the opportunities for international cooperation to support CCUS development in Nigeria?*

11:55-12:00 (WAT)

Closing remarks

12:55-13:00 (CET)

Dayo Adeshina, Programme Manager of the National LPG Expansion Plan, Office of the Vice President

Samantha McCulloch, Head of CCUS Unit, International Energy Agency