



## Concept Note

# Capacity Building on Methane Mitigation in African Oil and Gas Sector

June 2024

## **1. INTRODUCTION**

The African Energy Commission (AFREC) is a specialized technical agency of the African Union Commission (AUC), under the Department of Infrastructure and Energy created by Decision of the 37th Summit of the OAU African Heads of States and Governments in July 2001 and officially launched by the African Union Ministers in charge of Energy in February 2008 in Algiers, Algeria.

As per its convention, AFREC has a broad mandate to develop and recommend policies, strategies, research and plans based on AU Member states, sub-regional, regional and continental development priorities.

In addition to its convention, AFREC's activities and programmes are also based on the AUC Strategic Plan, various resolutions and declarations adopted by AU Summits and Energy Ministers regarding energy development in Africa.

One of the strategic pillars being implemented by AFREC is oil and gas which aims at providing both policy and technical support to AU Member States. Based on the 2022 African Union common position on energy access and just transition which promotes the use of both renewable and non-renewable energy sources in meeting the energy access gap on the continent, AFREC would like to support the member states in their decarbonisation effort of oil and gas operations through building both human and institutional capacity.

Gaps in human and institutional capacity as well as lack of specialised skills are some of the major challenges hindering the development of the energy sector in Africa. These gaps differ based on the sector, country and region in Africa. Hence, there is a need for capacity building in multiple facets of the energy sector within AU member states.

## **2. THE METHANE CHALLENGE**

Methane is responsible for at least 30% of current rise in global temperature and its emissions remain a major challenge in the oil and gas producing jurisdictions. This challenge is exacerbated by the lack of investment in early detection and mitigation systems leading to excessive emissions in the atmosphere. In addition, the emissions have adverse effects on the climate being one of the major greenhouse gases.

Recent initiatives undertaken by countries and companies within Africa to reduce methane emissions from oil and gas operations offer promising insights into the achievable. However, to adequately address the magnitude of the climate crisis within the necessary timeframe, these efforts must be amplified and embraced throughout the global oil and gas supply chain.

It is therefore paramount that effort to mitigate emissions is stepped up on the African continent. However, some of the African Union Member States do require support to handle the same. In this regard, the African Energy Commission (AFREC) aims to build capacity in the AU Member States to mitigate and successfully respond to methane emission in their oil and gas operations.

## **3. COLLABORATING FOR IMPACT**

Achieving a sustainable, low-carbon energy future is a crucial objective that requires strong vision and steadfast dedication from governments, bolstered by support from development partners and the private sector among many others. In recent years, the African Energy Commission (AFREC) has been actively engaged in securing fresh commitments and driving concerted actions towards this goal.

In this context, AFREC in partnership with United Nations Environment Programme (UNEP) through the International Methane Emissions Observatory (IMEO) is providing a comprehensive Methane Mitigation Capacity Building programme that will be carried out in African countries involved in oil and gas operations to contribute to overall decarbonisation of the sector.

#### **4. OBJECTIVE**

The main objective of the capacity building programme is to:

- Ensure participants grasp the origins and ramifications of methane emissions comprehensively.
- Empower participants with the necessary knowledge and competencies to execute efficient methane mitigation strategies.
- Cultivate collaboration and knowledge exchange among stakeholders engaged in methane emission reduction endeavours.
- Facilitate the execution of methane mitigation initiatives at various levels, including local, regional, and national scales.
- Support in country policies and regulatory frameworks that aims at reducing methane emissions and promoting sustainable energy development.

The in-person training will be conducted over two (2) days covering eight modules with the first three modules being the core. The participants who complete the core modules will be given a certificate of participation co-signed by AFREC and UNEP.

#### **5. OUTLINE OF THE TRAINING PROGRAMME<sup>1</sup>**

- Core Module 1: Methane emissions in the oil and gas sector. As an overview of methane emissions, this module defines terminology related to methane and identifies major emissions sources from oil and gas sector. It further explores how countries and companies can reduce emissions in pursuit of ambitious NDCs.
- Core Module 2: Methane detection, measurement, and quantification. This module provides an overview of the currently available technologies to detect and measure emissions, demonstrates how total emissions can be quantified and explains why there is a need for better quantification technology and methodologies.
- Core Module 3: Methane mitigation. In this module, participants will learn about the major sources of methane emissions and cost-effective abatement potential and mitigation activities through the efforts of governments, regulators and operating companies.
- Module 4: Advanced upstream methane emissions. For those with a science or engineering background there will be an optional module that provides a deeper understanding of existing best practices and technologies for detection, measurement, quantification and mitigation of upstream methane emissions.
- Module 5: Regulatory approaches to methane emissions. This module explores how countries can develop policies and regulations to reduce oil and gas methane emissions, learning from experience to design frameworks that are tailored to local circumstances. It covers the main variables that should be considered when establishing new regulations, different existing regulatory approaches and a set of essential elements of methane policies.
- Module 6: Satellite. The Satellite Modules focus on exploring the main characteristics, limitations, and potential that the technology has for methane detection, measurement, and quantification. It elaborates on the importance that satellites will have as an open-access source

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<sup>1</sup> This will be further discussed and refined based on consultation between the parties.

of information, and how this could impact the way governments, companies, and society looks at methane emissions globally.

- Module 7: Flaring. In the flaring module, a detailed explanation of the topic is presented. It discusses the main characteristics and challenges those flaring activities pose to climate change and resource management worldwide. It also gives an overview of the different tools available for measurement, quantification, and mitigation of flaring emissions.
- Module 8: LNG. The LNG module brings to light the unique challenges that this growing industry is having while acknowledging the lack of knowledge on emissions sources and mitigation practices, raising the need for further research in the area. This module provides an overview of the main emission sources and mitigation options, as it is currently known. In addition, some elements of policy and expected market developments specific to LNG are presented.

## **6. TARGET AUDIENCE**

The Capacity Building Programme proposed in this concept note targets 30 participants at a time and is designed for the following oil and gas sector stakeholders in Africa:

- Policy Makers
- Planners
- Regulators of Oil and Gas
- Regulators of Environment
- National Oil and Gas Companies
- Other Relevant Stakeholders.

## **7. COST OF THE TRAINING**

The training is provided to AU Member States free of charge as the cost is covered under AFREC partnership with UNEP and IMEO.

## **8. DURATION**

An in-person training over 2 consecutive days for each training session is envisaged. The interactive sessions format allows participants to tailor experience throughout the training period.

## **9. DATE**

The webinar will take place ONLINE on Tuesday, **July 2<sup>nd</sup>, 2024**, from **12:00 p.m. to 2:00 p.m.** (Algiers time).

## **10. REGISTRATION LINK:**

<https://zoom.us/meeting/register/tJlpduGppzwrGdbcDtzQ7rL117-8AhFH0aWM>

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