

Ninth Climate Change and Development in Africa (CCDA-IX)

Pre-Event

Green hydrogen for industrialization and energy transition in Africa: potential opportunities and challenges

16:00 – 17:30, 14 September 2021

Room U / Zoom Link

12:00 – 13:30 Cabo Verde Time (GMT/UTC – 1) / 16:00 – 17:30 East Africa Time

Register in advance for this meeting:

https://us06web.zoom.us/meeting/register/tZAsduurrD8oHtwLS_hLg0_ABj_6GexBN7q

Introduction

The recent Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) on the physical basis of climate change has made it very clear that human activity is responsible for climate change¹. Africa is very vulnerable to the adverse impacts of climate change, estimated to be costing the economies of African countries on average about 5 per cent of their GDP². The dependence of many African countries on fossil fuel commodities exposes them inflationary and fiscal challenges owing to the global volatility of fossil fuel prices, especially in the context of increasing global pressures to phase out fossil fuels to mitigate climate change.

The continent is home to 17% of the global population but only accounts for less than 4 per cent of greenhouse gas emissions and is the least energized region, with about 75 percent of the 759 million people globally without access to electricity and 35% of the 2.6 billion people without access to clean cooking solutions. Yet, Africa has abundant energy resources – renewable and fossil.

Given that about two thirds of greenhouse gas emissions are related to energy, climate change has been the catalyst for the energy transition taking place internationally. The risks associated with climate change have been recognised as part of the Paris Agreement within the United Nations Framework Convention on Climate Change (UNFCCC) which entered into force in November 2016. The central aim of this is to keep a global temperature rise this century well

¹ https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

² According a report by the African Development Bank, UNEP and the Economic Commission for Africa (<https://www.afdb.org/en/documents/climate-change-impacts-africas-economic-growth>)

below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

Africa needs plenty of energy to quickly close its energy access deficit, address increasing energy demand from a growing population, industrialize and trade, respond to climate change, and meet its overall development objectives as encapsulated in the UN 2030 Agenda for Sustainable Development and the African Union's Agenda 2063. The continent can meet this increasing need for energy with its abundance clean energy resources. The need for clean and sustainable energy is growing in importance and impetus and is demanding new technologies and new approaches for the way that energy is produced and used.

Globally, academic literature, policy- makers and industry leaders have started proposing hydrogen as a fuel that could fundamentally change the way energy is conceptualised. It is believed that it is a fuel that can be deployed on a large scale and can bring with it significant benefits such as:

- Reduction of greenhouse gases
- Reduction of oil consumption for transport and industry sectors
- Advancing renewable energy deployment by using hydrogen as storage and transmission
- Opportunities for economic growth through the development of a high tech hydrogen economy

Adding green hydrogen to the energy mix in Africa holds a lot of benefits for the region. It creates huge opportunities to explore and utilize the largely untapped renewable energy resources to meet own electricity access needs, promote green industrialization and trade that capitalizes on the Africa Continental Free Trade Area, meet green targets as outlined in the SDGs, Agenda 2063, NDCs and addresses climate change mitigation. In addition, the export of green hydrogen could become a source of income for the region and create economic growth and socioeconomic opportunities - leveraging and boosting existing and potentially new partnerships, including the Africa-EU partnership.

However, there are some critical issues that need to be addressed to unleash the full potential of green hydrogen production on the continent.

Objective of the workshop

Through this workshop, the United Nations Economic Commission for Africa (ECA) and the Konrad-Adenauer-Stiftung aim to facilitate the dialogue among decision makers and other

stakeholders in Africa on the necessary conditions to enable hydrogen production on the continent. Amongst these, the following questions will be addressed:

1. What is the global state of play on green hydrogen and where does Africa stand so far?
2. What are the opportunities, including regional approaches, for green hydrogen in Africa?
3. How to guarantee the engagement of all relevant stakeholders in the energy transition with green hydrogen on the continent?
4. How to overcome the socioeconomic challenges of hydrogen production?
5. What are the necessary policy and regulatory frameworks needed for viable hydrogen economies in Africa?

In addition, the discussions will explore the extent to which green hydrogen could foster regional integration and become an integrative part of raising ambitions within the NDCs.

Format and structure

The workshop will take place as a pre-event of the 9th session of the Climate Change and Development in Africa (CCDA-IX) conference and aims to contribute to the overall objective of stimulating a continent-wide debate on what an energy transition should look like and how the continent can develop appropriate frameworks to prepare for a just energy transition.

Due to limitations caused by the Covid-19 pandemic, this edition will use a hybrid model of participation, including virtual and in-person speakers and delegates as a way to overcome those limitations and enlarge the outreach. All measures will be taken to promote and support the safe stay in-person participants who decide to travel in Cabo Verde. The use of masks will be compulsory, while social distancing will be kept and health and hygiene facilities will be available around the clock. Participants will be updated when registering on the requirements to travel to Cabo Verde.

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Draft Programme

Time (Cabo Verde Time)	Description
12:00 – 12:15	<p>Welcome and opening statements</p> <p><i>Moderator: Ms. Anja Berretta</i></p> <ul style="list-style-type: none"> • Mr Jean-Paul Adam, Director of Technology, Climate Change, and Natural Resources Management, ECA • Dr. Stefan Friedrich Konrad-Adenauer-Stiftung, Head of Department sub-Saharan Africa
12:15 – 13:25	<p>Presentation: Current state of play on green hydrogen in Africa</p> <p>Dr. Solomon Agbo, Forschungszentrum Jülich</p> <p>Panel discussion</p> <ul style="list-style-type: none"> • Mr. Frank Engel, Special Advisor to Hydrogen Europe • Dr. Maged Mahmoud, Technical Director at the Regional Center for Renewable Energy and Energy Efficiency, Egypt • Mr. NJ Ayuk, Executive Chairman, African Energy Chamber, South Africa <p>Discussants</p> <ul style="list-style-type: none"> - Mr. Johan van den Berg, Head of Africa EU Energy Partnership - Mr Victor Konde, Officer-in-Charge, Technology and Innovation Section, ECA <p>General discussion</p>
13:25 – 13:30	<p>Closing remarks and next steps</p> <ul style="list-style-type: none"> • Mr. Linus Mofor, Senior Natural Resources Officer, Energy, Infrastructure and Climate Change, ECA