
One-Day Conference: Green Hydrogen for East Africa

Conference Title: Catalysing Green Growth: Advancing the Future of East Africa's Green Hydrogen and Renewable Energy Ecosystem

Dates: Tbc (28th - 29th Nov 2024)

Overview:

The Two-Day Conference on Green Hydrogen, part of the African/East African Energy Leaders Dialogue, is a premier event aimed at exploring the transformative potential of green hydrogen in addressing East Africa's energy, climate, and development challenges. Hosted in Nairobi, Kenya, the conference will focus on leveraging the region's abundant renewable energy resources – particularly solar, wind, and geothermal – for green hydrogen production. This event seeks to position East Africa as a leader in the global energy transition by integrating green hydrogen into the Water-Energy-Food (WEF) Nexus, promoting sustainable economic growth, and mitigating climate change impacts.

Objectives and Expected Outcomes:

The primary objectives of the conference are to showcase Kenya's leadership in renewable energy and green hydrogen, facilitate regional knowledge sharing, and emphasise the role of green hydrogen in reducing greenhouse gas emissions and enhancing climate resilience. The conference aims to attract significant investment by presenting economically viable green hydrogen projects and discussing innovative financing strategies. It will also develop policy frameworks and recommendations to create a supportive environment for the hydrogen economy's growth. Expected outcomes include the development of a strategic roadmap for regional green hydrogen adoption, establishment of new partnerships and investment commitments, and formulation of comprehensive policy recommendations to support sustainable sector development.

Conference Agenda (Draft):

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| 8:30 - 9:00: | Registration and Networking Breakfast Participants register and network, fostering connections among stakeholders. |
| 9:00 - 9:30: | Opening Remarks and Keynote Address Opening Remarks: Delivered by a senior Kenyan government official, highlighting Kenya's achievements in renewable energy and green hydrogen. |
| Keynote(s) | A global expert from the World Energy Council discusses the critical role of green hydrogen, powered by renewable energy resources, in global and regional energy transitions, climate action, and sustainable development. |
| 09:30 – 10:15 | Plenary session: Regional Synergies and Opportunities in Green Hydrogen – a panel discussion on how (East) East African countries can collaborate to harness their vast renewable resources such as solar, and wind – and <i>especially</i> geothermal – for green hydrogen production, exploring regional synergies, economic opportunities, and contributions to climate goals. |
| 10:15 - 10:30: | Coffee Break: A brief pause for refreshments and networking. |
| 10:30 - 11:45: | Deep Dive Sessions: (Simultaneous Sessions) |
| Session I: | Investment and Financing for Green Hydrogen |

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| | <p>Focused on attracting investment, managing risks, and exploring innovative financing models for green hydrogen projects, with an emphasis on leveraging East Africa's renewable energy potential.</p> |
| Session II: | <p>Technological Innovations and Infrastructure Development Examination of the latest advancements in hydrogen production technologies, infrastructure development, and the integration of renewable energy sources, including solar and wind.</p> |
| Session III: | <p>Use Cases for Green Hydrogen in East Africa Presentation of practical applications and successful case studies in industry, transportation, and energy storage, highlighting how green hydrogen can support the WEF Nexus and enhance climate resilience.</p> |
| Session IV: | <p>Geothermal Energy and Green Hydrogen A dedicated session on the role of geothermal energy in green hydrogen production, exploring its potential, current projects, and future opportunities in East Africa.</p> |
| 11:45 – 12:30 | <p>Plenary Session: Policy Frameworks for Green Hydrogen Development A panel discussion featuring government officials, regulators, and industry experts on creating enabling policy and regulatory frameworks that support the development and scaling of green hydrogen technologies, ensuring alignment with renewable energy strategies.</p> |
| 12:30 - 13:30: | <p>Lunch Break: An opportunity for networking and further discussion among participants.</p> |
| 13:30 - 14:45: | <p>Deep Dive Sessions: (Simultaneous Sessions)</p> |
| Session V: | <p>Building a Skilled Workforce for the Hydrogen Economy Discussions on educational and training initiatives needed to develop the skills required for the hydrogen sector, focusing on partnerships with academic institutions and industry to support the renewable energy transition.</p> |
| Session VI: | <p>Environmental and Social Impacts of Hydrogen Projects Exploring the environmental benefits of hydrogen technologies, strategies for community engagement, and ensuring the social sustainability of projects.</p> |
| Session VII: | <p>Strategic Partnerships and Regional Cooperation Focus on building strategic partnerships between governments, private sector entities, and international organisations to enhance regional cooperation and align efforts in green hydrogen development.</p> |
| Session VIII: | <p>(East) Africa's Renewable Energy Resources and the Capacity for Large Scale Hydrogen Production Assessment of the current stock of East Africa's renewable energy resources and infrastructure, exploring their capacity to support large-scale green hydrogen production and regional energy security.</p> |
| 14:45 - 15:00: | <p>Coffee Break: A brief intermission for refreshments.</p> |
| 15:00 - 15:45: | <p>Report Back from Parallel Sessions Rapporteurs from each parallel session provide summaries of key discussions, findings, and recommendations, offering a comprehensive overview of the conference outcomes.</p> |
| 15:45 - 16:15: | <p>Closing Plenary: Towards a Green Hydrogen Future A review of the day's discussions on East Africa's potential for green hydrogen. Key topics include investment strategies, technological innovations, policy frameworks, regional cooperation, workforce development, and environmental impacts. This session sets the stage for day two, focusing on green hydrogen's applications in transport, industry, rural electrification, and strategic planning for Africa's hydrogen economy.</p> |

4:15 PM - 4:30: Closing Remarks

Final remarks by conference organizers, emphasizing the importance of sustained efforts and partnerships in achieving the region's green hydrogen and sustainability goals.

17:30 – 17:30:

Networking Reception

An informal session for participants to network, discuss potential collaborations, and explore opportunities in the green hydrogen sector, capitalising on East Africa's vast renewable energy resources.

Day Two:

09:00 – 09:10

Plenary: Introduction to Day 2 – a focus on green hydrogen's practical applications, following day one's foundational discussions. Key sessions will explore decarbonising the transport sector with hydrogen-powered vehicles and infrastructure, as well as innovations in industrial processes and rural energy access and electrification. The day aims to develop a strategic roadmap for Africa's hydrogen economy, addressing necessary policies, investments, and technologies, building on insights gained from day one.

09:10 – 10:40:

Plenary: Developing a Renewable Energy Ecosystem for a Hydrogen Powered the Future of in Africa

A panel discussion that will explore the integration of green hydrogen-powered systems for the transport sector in Africa, with a focus on developing hydrogen-powered vehicles and refueling infrastructure. Additionally, the discussion will address the broader potential of green hydrogen to enhance energy solutions across the continent, including improving energy access in rural areas and supporting decarbonisation efforts in various industries. This comprehensive approach aims to position green hydrogen as a key driver of sustainable development and energy transformation in Africa.

10:40 – 11:00

Coffee Break: A break for refreshments

11:00 – 12:30

Simultaneous Deep Dive Sessions on Innovations in Green Hydrogen Energy Solutions for Africa

Session IX:

Innovating Towards Green Hydrogen for EV Charging Stations: Discussion on the technological advancements and infrastructure development needed to utilise green hydrogen for generating electricity to power EV charging stations, enhancing sustainable mobility solutions.

Session II:

Hydrogen as a Catalyst for Industrial Transformation: Exploration of how green hydrogen can be integrated into industrial processes to reduce carbon footprints, focusing on sectors like steel, cement, and chemicals.

Session III:

Hydrogen Solutions for Rural Electrification: Innovative approaches to using green hydrogen for providing reliable and sustainable energy access in remote and off-grid communities, highlighting case studies and pilot projects.

Session IV:

Strategic Roadmap for Hydrogen Economy in Africa: Comprehensive discussions on policy, investment, and technological strategies to build a resilient and scalable hydrogen economy in Africa, addressing challenges and identifying opportunities.

12:30 – 13:30

Lunch Break: Networking opportunity for participants to engage with speakers and industry experts.

13:30 – 14:30

Synthesis and Insights: Reporting on the Deep Dive Sessions

This plenary will serve as a comprehensive wrap-up, providing an overview of the key discussions, findings, and recommendations from the 12 deep dive sessions held throughout the conference. Rapporteurs from each session will present concise summaries, highlighting major themes, significant insights, proposed strategies, and identified challenges and opportunities. This session aims to consolidate the diverse perspectives shared during the conference, fostering a unified understanding among participants. It will set the stage for the final discussions, guiding the development of a strategic roadmap for green hydrogen development in East Africa.

14:30 – 15:15

Closing Plenary

Presentation of the strategic roadmap for green hydrogen development in East Africa, summarising key takeaways and highlighting commitments made during the conference. This session includes a *“Call to Action”* urging stakeholders to commit to ongoing collaboration, investment, and policy development to advance green hydrogen solutions, address climate change, and enhance regional energy security and sustainability.

Session Interconnections and Contributions to the Conference Theme:

This conference aimed to explore opportunities for positioning (East) Africa as a leader in green hydrogen by leveraging renewable resources, nurturing collaborations, and driving investment and innovation in sustainable energy solutions. The panels and deep dive discussions are interlinked by designed in order to offer a comprehensive view of leveraging East Africa’s renewable energy for green hydrogen production. The deliberations establish the strategic importance of green hydrogen in the region’s energy transition, while parallel sessions delve into critical areas such as investment, technological innovations, and geothermal energy utilisation. The conference underscores the need for innovative financing, cutting-edge technologies, and regional cooperation. It also highlights practical applications of green hydrogen in industry, transport, and rural electrification, emphasising the creation of a skilled workforce and the importance of social and environmental sustainability. These interconnected discussions aim to position East Africa as a leader in sustainable energy systems, providing stakeholders with the insights and tools needed to advance the green hydrogen agenda.