Africa Climate Week 2019
Ghana

Technology – Energy Transition
Report from the session

Thematic Block: Technology 2 – Energy Transition

Thursday, 21 March 2019
11:00 – 13:25
Summary

Please provide a small summary description of the session, including speakers, number of participants format of the session; feel free to attach or include links of any relevant supporting documentation.

The energy transition in Africa can meet the continent’s rapidly-growing energy needs, drive business growth, and advance sustainable development. With ongoing innovation and falling costs, technology has switched from being an obstacle to becoming an opportunity for the energy transition in Africa. The transition can bring opportunities and broad sustainable co-benefits, particularly through cost-effective business models, technology advancements, and initiatives. During this session, speakers discussed how Africa is able to adopt innovative, sustainable technologies and play a leading role in global action to shape a sustainable energy future.

This two-part session emphasised how technology can present opportunities for everyone to take part in the energy transition, with opening and closing segments to set the scene and draw out key messages respectively. Special emphasis was placed on showcasing Africa-led innovations, solutions, initiatives and strategies. The first segment provided an overview of the latest innovations and dynamic developments in the energy sector, including both centralised and decentralised power systems. The segment comprised of brief presentations by speakers in a “TED talk” style followed by a discussion moderated by IRENA. Speakers in this segment included H.R.H. Princess Abze Djigma, Chair of the H.R.R. Princess Abze Djigma Foundation; Dr. Isaiah Owuunji, Programme Coordinator: Energy and Climate Programme, WWF Uganda; Prince Essel, CEO and Co-Founder, Maiseville Groupe; and Bernise Dapaah, Chief Executive, Ghana Bamboo Bikes Initiative.

The second segment discussed how countries can best use these technology developments to develop realistic and attainable national strategies and plans while strengthening institutional and human capacity. The segment comprised of a Davos-style discussion among speakers and the audience moderated by Mr. Mahama Kappiah, Executive Director, ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE). Speakers of this segment included Safiatou Alzouma Nouhou, Director of Independent Delivery Unit (IDU), Renewable Energy Initiative for Africa; Dr. Nii Darko K. Asante, Head of Technical Regulation and Chair of Integrated Resource and Resilience Planning Steering Committee, Energy Commission, Ghana; and Edwin Aalders, Senior Principal Scientist for Climate Change, DNV GL.

Key Messages

Please summarize in one or two paragraphs the key messages of the event at ACW 2019 and how they were relevant to the thematic block.
Africa has an opportunity to “leapfrog” to a sustainable energy future that is suitable to the needs of the continent with the help of modern renewable energy and energy efficiency technologies and indigenous solutions. These technologies and solutions are increasingly cost-effective compared to conventional solutions and greater efforts should be made to increase their deployment for driving Africa’s transition. They also provide the continent with multiple benefits, notably speedy access to modern energy services and related socio-economic benefits.

- Africa’s renewable energy potential is massive, but at present only a fraction of global investment into renewables deployment comes to Africa (around 2%). Most of investment comes from the public sector. This needs to rapidly change, with strategic use of public fund to leverage private investment at scale. Pipeline of projects is being developed by Africa Renewable Energy Initiative (AREI), led by five African Heads of State aiming to deploy 10GW of renewables by 2020. AREI already has a pipeline of 1.7 GW of renewable projects, in the amount of USD4 billion.

- There are abundant local solutions implemented by a wide range of stakeholders. A range of such solutions was showcased, all of which were considered scalable. It was highlighted that there has to be more opportunities for Africa to share these solutions among themselves. It was emphasised that new technologies – namely blockchains and AI, are not only enablers but also assets (e.g. data ownership) and Africa needs to be alert from the outset to harvest the benefits.

- Africa’s energy transition must consider not only the power sector, but also heat and transport, and be driven by local solutions and ownership, including by adding value to the production and assembly chains of renewable energy technologies.

- Africa’s energy transition requires long-term planning that considers cost-effective and climate-proof solutions, avoids inefficient infrastructure lock-in, and maximises benefits. Better cross-border, as well as aggregating decentralised projects can create a larger market that allows for scale effects to speed up the energy transition.

- Africa’s energy transition, driven by renewable energy technology, can fulfil multiple objectives, including by unlocking economic development and socio-economic benefits, i.e., health benefits from reduced air pollution, job creation, etc. The energy transition can also attract new investments in energy technologies and infrastructure, open new industrial opportunities and economic activities.

**Contribution to UN SG summit/Ambition**

Please collect 4-5 key takeaways for each of the topics listed below. Key takeaways relevant for global ambition should be drafted as inputs to the 2019 Climate Summit. Such takeaways should reflect the determination of Parties and non-Party stakeholders to achieve a peaking of global emissions before 2030 and zero net emissions by 2050; increase adaptation and foster climate resilience; and make all financial flows consistent with low emissions and climate resilient development.

Key takeaways should address the following questions within respective thematic blocks.

- **How could the region become a frontrunner in climate ambition?**
- **Where are the short and medium-term opportunities to increase ambition?**
- **What are the long-term prospects (e.g. by 2050) for achieving low emissions and climate resilient development?**
- **Who are the key non-Party stakeholders and how can their ambition be maximized?**
Key takeaways:
Relevant for global ambition (to be placed in respective boxes after session)

- Since 2000, Africa has been experiencing rapid economic growth and improving social conditions. Average real gross domestic product reached 3.6% in 2017 and is projected to rise to around 4% in 2018 and in 2019 (African Development Bank, 2018). The total GDP in Africa is expected to grow 2.5 - 3-fold between 2015 and 2030. Six African economies are expected to feature among the top ten fastest growing economies in 2018 (World Bank, 2018). Given the continent’s large and growing population, energy demand is expected is nearly double by 2040. Endowed with substantial renewable energy resources, Africa is in a position to adopt innovative, sustainable technologies and to play a leading role in global action to shape a sustainable energy future.
- Clean, indigenous and affordable renewable energy solutions offer the continent the chance to achieve its economic, social, environmental and climate objectives. Sustainable development and use of the continent’s massive biomass, geothermal, hydropower, solar and wind power have the potential to rapidly change Africa’s current realities.
- Renewables provide the chance to leapfrog to a sustainable, prosperous future for all. Increasing access to reliable, affordable and clean energy resources is a key priority, particularly in sub-Saharan Africa. Around 600 million people in Africa still have no access to power, representing 48% of the continent’s population of nearly 1.2 billion (Organisation for Economic Co-operation and Development International Energy Agency, 2017).
- The Sustainable Development Goal on energy (SDG7) is incorporated in the social, economic and sustainability goals of Africa’s Agenda 2063. The energy transition promises to not only support our long-term climate objectives, but it also contributes to the realisation of a number of other key development goals. Sustainable energy is at the forefront of the development plans of African nations, recognising its central role in achieving all SDG targets and mitigating and adapting to climate change.
- Out of the 53 African Nationally Determined Contributions (NDCs), 45 contain quantified renewable energy targets (IRENA, 2018). These acknowledge the abundant opportunities offered by Africa’s vast renewable energy to put the continent on a clean development path. They are however not reflective of cost-effective potential that exists. Policy makers often drift into familiar and conservative approaches and do not consider transformational potential of renewables and efficiency.
- Africa could meet nearly a quarter of its energy needs from indigenous and clean renewable energy by 2030. Modern renewables amounting to 300 gigawatts (GW) could provide half the continent’s total electricity generation capacity. This corresponds to a sevenfold increase from the capacity available in 2017, which amounted to 42 GW. A transformation of this scale in Africa’s energy sector would require average annual investment of 70 billion US dollars (USD) to 2030, resulting in carbon-dioxide emissions reductions of up to 310 megatonnes per annum (IRENA, 2015). Africa Renewable Energy Initiative (AREI) launched at COP21 is working toward this objective to support countries in shifting their strategies and investments toward climate-proof energy future.
Increasing the share of renewable energy

Investment and innovation

Cooperation and initiatives
Africa Renewable Energy Initiative (AREI)
Africa Youth Initiative for Climate Change
Mama-light
Energy Generation
Regional institutions (AUC, UNECA, ECOWAS, ECREEE, SACREEE, LAS, RCREEE, AFDB, and regional power pools)

Relevant for actors and processes in the region

Technical Examination Processes (TEP)

Did the event address policy options to enhance mitigation or adaptation in Africa on the topics identified for 2019 as below? If so, please list them, specifying to which TEP they should be addressed.

TEM Topics for 2019:
Mitigation: Off-grid and decentralized energy solutions for smart energy and water use in the agrifood chain
Adaptation: Adaptation finance
• Input TBC until after session.