

African Ministerial

Scaling up Renewable Energy Deployment in Africa

Ninth session of the Assembly – 10 January 2019, 13:00 – 16:00

Background

Africa has the chance to achieve its economic, social, environmental and climate objectives, as well as to leapfrog to a sustainable energy future. Ministers and senior officials, together with high-level representatives of key regional organisations and development partners, are invited to discuss the way forward to raise the region's ambition for renewables and boost action to accelerate their deployment.

Key Issues

African energy sector under transformation. African countries need to meet fast-growing energy demand and extend modern services more widely to power sustainable economic growth and advance sustainable development objectives. The continent could cover nearly a quarter of its energy needs through the use of indigenous and clean renewable energy by 2030.¹ IRENA has identified sustainable renewable energy options amounting to nearly 10 exajoules of new capacity addition. Roughly half of this would come through biomass-based heat applications, which would progressively displace traditional biomass combustion. However, substantial potential also exists to scale up bioenergy use for the power and transport sectors. Deployment of renewables in a sustainable manner could make up half of the African power capacity by 2030, thereby reducing carbon-dioxide emissions by more than 310 megatonnes.

In pursuit of the energy transformation, the continent has been moving forward in tapping its vast renewable energy potential, by creating more conducive investment conditions. This includes setting deployment targets; developing policy and regulatory frameworks; improving awareness on the economic and socio-economic benefits of renewables; strengthening institutional structures and local capacities across the value chain for renewables; forging strong partnerships; and co-ordinating efforts among key stakeholders to ensure effective action.

IRENA's engagement in Africa. IRENA has engaged with Africa since the Agency's early days. Aiming to support and accelerate the continent's transformation in the context of the global transition to renewable energy. In July 2011, IRENA convened a high-level consultative forum attended by African and other countries, as well as by regional and multilateral institutions. This Forum, together with the resulting Ministerial Communiqué, constituted the formal starting point of IRENA's engagement in Africa. In addition to underlining the importance of building a presence in Africa, the Communiqué set out institutional arrangements for co-operation with African regional bodies and other strategic partners.

- ***Clean Energy Corridors in Eastern, Southern and West Africa.*** These ambitious regional initiatives promote the deployment of renewables through the creation of larger and more robust power markets, which would combine cross-border power trade with improved efficiencies and economies of scale. Clean Energy Corridors were first established within the Eastern Africa and Southern African Power Pools and then activities extended to the West Africa Power Pool.

¹ IRENA (2015), *Africa 2030: Roadmap for a Renewable Energy Future*, IRENA, Abu Dhabi



- *Emerging regional collaboration with North and Central Africa.* The Pan-Arab Clean Energy (PACE) initiative provides a regional action plan to scale up renewables in power systems across the Arab region. IRENA also collaborates with the Economic Community of Central African States (ECCAS), supporting the development of a Renewable Energy Roadmap for the sub-region that provides a concrete set of actions to strengthen enabling policies and regulatory, institutional and financial frameworks for renewable energy deployment at regional and national levels.

IRENA's regional work has led to the establishment of a strong framework to build technical knowledge and capacity and more conducive investment environments for renewables in a growing number of countries. This success can be attributed to several key factors:

- ***High political commitment and solid partnerships.*** IRENA's regional initiatives enjoy high political commitment and support in their respective regions. The Clean Energy Corridors in Africa have been adopted at the Ministerial level, and the West African Corridor was endorsed by Heads of State in June 2017. A Ministerial declaration adopted during the Africa Union's Specialised Technical Committee meeting last year recommends the integration of the Clean Energy Corridors into national renewable energy and climate change agendas. The Central Africa roadmap, which was technically validated in November 2018, is set for consideration by Heads of State from the region. IRENA has also pursued strategic, results-oriented partnerships with various African organisations, such as, the African Union and the African Development Bank, as well as with development partners, aiming to leverage existing efforts, avoid duplication and maximise long-term impact.
- ***Strong linkages to regional programmes and initiatives.*** Key partners include the Programme for Infrastructure Development in Africa (PIDA) and the Africa Renewable Energy Initiative (AREI). Through participation in PIDA's Steering Committee, IRENA has engaged with the African Union and the New Partnership for Africa's Development (NEPAD) in the formulation of the next phase of the programme to reflect Africa's vast renewable energy potential, beyond just hydropower and geothermal resources, in continental planning to 2030.
- ***Concrete outcomes and high impact on the ground.*** IRENA's initiatives are tailored to address regional and country-specific needs and priorities. Implementation comes through five core work streams:
 - resource assessment and zoning;
 - national and regional energy planning;
 - enabling frameworks for investment;
 - cross-cutting capacity building; and
 - awareness raising activities.

The resulting work has brought about a range of valuable and tangible outcomes:

- *Resource-rich and cost-effective areas mapped out for solar and wind development.* Renewable energy resource assessment and zoning analysis identified high resource potential and cost-effective power generation zones for utility-scale wind, solar photovoltaic (PV) and concentrated solar power (CSP) development across Eastern, Southern and West Africa. To date, the financial viability and bankability of 92 solar PV and wind project sites that were identified within the zones and earmarked for development have been assessed in 10 African countries. The appraisal results are helping policy makers in the designing of power procurement processes. Eswatini and Zimbabwe, for example, are among the countries considering auctions to develop project sites based on IRENA's appraisals.



- National and regional planning processes. The outcomes of the resource assessment work have provided essential input into the long-term planning processes at regional and national levels. In Southern Africa, for example, IRENA supported the development of the Eswatini Energy Masterplan to 2034, launched in October 2018. This included a comprehensive national training programme, technical support for development of the national planning model, and providing advice on the draft Masterplan report. A similar capacity building and technical advisory programme is currently being undertaken in Sierra Leone to support the elaboration of a national energy masterplan. At the regional level, IRENA’s input has been essential in the development of the Southern African and West African Power Pool masterplans.
- More conducive investment frameworks. Supporting countries in strengthening their policy, regulatory, technical and financial frameworks is a key priority area. Through country-led, multi-stakeholder Renewables Readiness Assessment (RRA) process facilitated by IRENA, 14 Africa countries have assessed the suitability of their existing conditions for sustained renewable energy deployment and identified key actions to accelerate it. IRENA’s continuous engagement with countries during the post-RRA implementation phase and the promptness of development partners in formulating assistance based on RRA recommendations have played a significant role in creating more conducive investment conditions for renewables in Africa.
- Local capabilities across the renewable energy value chain. IRENA has helped regional and national regulatory authorities in the Southern African Development Community (SADC) in assessing their existing planning processes vis-à-vis global best practices. Through a comprehensive regional capacity building programme, West Africa’s capacities have increased for grid planning and operation with variable renewables as well as for the development of renewable energy power purchase agreements. Energy statisticians across Africa have been trained on the collection, processing and dissemination of renewable energy data as well as the construction of national renewable energy balances.
- Improved project bankability and easier access to finance. IRENA’s Sustainable Energy Marketplace has actively promoted and facilitated access to finance for 77 projects in 22 African countries, which were seeking a total investment of more than USD 3 billion. The IRENA/ADFD Project Facility, which mobilises funds from the Abu Dhabi Fund for Development (ADFD), has provided concessional loans for ten transformative, scalable renewable energy projects with clear development impact potential in nine African countries. IRENA’s Project Navigator team has held sub-regional and country-level training to support the development of bankable renewable energy projects.
- Tangible off-grid impact. Regional capacity building in West Africa helped to strengthen the development, management and financing of off-grid solar solutions. Through follow-up programmes in the region, IRENA has further supported:
 - Improvement of the skills of renewable energy professionals through a regionally harmonised certification system, recognised in all ECOWAS countries and currently piloted with off-grid solar PV technicians in Ghana and Senegal;
 - Over 80 small and medium-sized renewable energy developers, helping them improve their business operations and raise over USD 1 million of financing from local financial institutions. The programme is now being replicated in the SADC region.
- A stronger role for geothermal energy. Ten African countries and five African regional organisations have become members or partners in the Global Geothermal Alliance, a global platform facilitated by IRENA to promote development in this key sector through enhanced



dialogue, co-operation and co-ordinated action. Ethiopia has been identified as a pilot country to promote standardised geothermal resource assessments, review and reporting. Ongoing assessments in East Africa should provide scope for future regional co-operation on geothermal power and heat, including, direct utilisation to boost food security.

Objective

The Ministerial Meeting will provide a platform for a high-level discussion on scaling up renewable energy uptake in Africa, with a view to supporting its ambitions to achieve sustainable growth and prosperity. The event is expected to provide guidance in formulating the next phase of IRENA's engagement with the continent, based on key achievements and concrete impacts of various initiatives facilitated by IRENA across Africa and undertaken in collaboration with governments as well as regional partners.

Guiding Questions

- Considering Africa's changing socio-economic landscape and rapid demographic growth, how can we enhance the contribution of renewable energy to meet Africa's long-term energy needs in a reliable, sustainable and affordable manner and to also support the achievement of the continent's ambitious socio-economic development goals?
- What are the key requisites for IRENA to expand its focus from assessment and planning to the implementation of effective and innovative solutions, both to scale up investment and to expand the growth of renewables beyond the power sector to also include the end-use sectors of heat and transport?
- How could IRENA strengthen collaboration with African institutions and development partners under various regional initiatives and programmes to achieve higher impact on the ground?