



Mission report for Africa-China Business Roundtable in Shanghai, China

This report covers activities that took place during the first mission under Africa REMI to facilitate South-South cooperation and identify opportunities and strategies for increasing Africa's renewable energy manufacturing and export capabilities. There was a specific focus on the potential for investment, and knowledge and technology transfer between Africa and China.

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Africa Renewable Energy Manufacturing Initiative (Africa REMI)

At the 2023 Abu Dhabi Sustainability week, Sustainable Energy for All (SEforALL), The African Climate Foundation, Bloomberg Philanthropy, the ClimateWorks Foundation and the Chinese Renewable Energy Industries Association (CREIA) launched Africa REMI as a joint initiative that partners with intergovernmental agencies, enterprises, financial institutions, and research institutions working in the renewable energy field and green industries, to empower African countries to cultivate and scale up their renewable energy manufacturing capability.

Africa REMI brings together best practices of key players in the renewable energy field and gathers valuable experience especially from the Global South countries, championing renewable energy as a key anchor for the energy industry and economic growth in Africa.

Africa REMI is an international initiative that aims to enhance Africa's renewable energy development capacity and industrial chain resilience, focusing on areas like building the workforce, setting-up a best-in-class business environment, better cultivating a robust manufacturing ecosystem, and incubating pilot projects. We hope to unite governments in Africa and the Global South, renewable energy industries, academia, and research institutions to make full use of existing cooperation mechanisms and channels as well as further strengthening cooperation in the following key areas:

I. Building Africa's future RE manufacturing workforce. Sponsor training, employment and career development of engineers and technicians in Africa, with a focus on solar PV, battery refinery, and key adjacent industries. The programme will focus on supporting technical schools, developing online courses, worker exchange, sharing best practices to meet the demand for industrial chain localization, technology application, and project development.

II. Enable the set-up of best-in-class business environment. Inform, train, and support African government officials to accelerate and bolster their policymaking for "Africa for Africa" green manufacturing including but not limited to policy awareness, leadership development, country-specific policy pathway, policy advocacy.

III. Attract mature green manufacturers at scale to Africa. Provide mature green manufacturers with better access to consulting and financing services and cultivate a robust green manufacturing ecosystem in Africa. Major activities include, but are not limited to, helping build granular business cases, finding the optimal operating model in staffing and governance structure, understanding "status quo" of available financing, funding tailored advocacy and policy negotiations, scaling green capacity investment and finding best practice partnerships.

IV. Incubate Africa green manufacturing projects. In the future, we aspire to offer comprehensive grant support for green manufacturing initiatives in Africa, encompassing the entire lifecycle of projects, from initial planning and financing to seamless operations and successful sales of the final products.

The core objective of Africa REMI is to move from plan to action-demonstrating results in countries and scaling up local manufacturing of renewable energy components in Africa. As an open initiative, we expect more participation from organizations and enterprises to garner wisdom and strength from all stakeholders and jointly promote the global energy transition and help achieve low-carbon development.

SNEC 16th (2023) International Photovoltaic Power Generation and Smart Energy Conference

At the Global Green Energy Leaders Dialogue held during the International Photovoltaic Power Generation and Smart Energy Conference & Exhibition (SNEC2023) held in Shanghai, the **CEO and Special Representative of the UN Secretary General for Sustainable Energy for All, Damilola Ogunbiyi**, formally introduced the details of Africa REMI through a virtual address. A keynote speech was also given by the **Consul General for the Nigeria Consulate in Shanghai, Ambassador Chimezie Okeoma Ogu**, to further reiterate the willingness of government to support initiatives which sought to address energy transition and energy access in Africa.



The dialogue sought to bring together best practices of key players in the renewable energy field and gather valuable experience, especially from Global South countries, championing renewable energy as a key anchor for the energy industry and economic growth in developing countries.

The event also featured in-depth discussions on topics such as the international green energy development outlook amid carbon peak and carbon neutrality efforts, international cooperation in renewable energy industries, and optimization of financing for renewable energy industries in developing countries. In attendance were government representatives, CEOs from industry-leading companies, academic experts, market analysis organizations, financial institutions, and media representatives from Europe, Africa, Southeast Asia, and other regions. Participants shared insights on how to contribute to global efforts toward a green energy transition and sustainable development.

Africa-China Business Roundtable event

In collaboration with ClimateWorks Foundation and the Chinese Renewable Energy Industries Association (CREIA), we organized a roundtable workshop during SNEC2023.

The objectives of the **Business Roundtable on China-Africa Cooperation on Renewable Energy Industry Development & Financing** were to bolster the cooperative relationship between China and Africa in the sectors of renewable energy and green finance by exploring innovative models for mutual development and identify opportunities and strategies for increasing Africa's renewable energy manufacturing and export capabilities. The roundtable was designed to be an interactive platform for a diverse group of participants, including government officials from China, representatives from international

organizations, financial institutions and entrepreneurs. We were able to achieve the following:

- **Business facilitation and matchmaking:** Connect a cohort of African renewable energy companies from Ghana, Nigeria and Kenya with established Chinese manufacturers to discuss potential partnerships for local manufacturing. With support from CREIA, profiles of a shortlist of Chinese companies interested in diversifying into Africa as well as profiles of the African companies were exchanged prior to the event in order to enable immediate networking.
- **Financial & Technical support:** Facilitate discussions around potential areas of cooperation with industry experts such as the World Resources Institute Beijing (WRI) and finance organizations such as the China Africa Development fund on project support and facilitation, which could be provided to the potential business partnerships under Africa REMI.

The agenda featured discussions on strategic planning, mechanisms, and case studies related to green finance and renewable energy cooperation between China and Africa. Participants had the opportunity to share their experiences and insights, thereby contributing to the collective effort in advancing green development cooperation between China and Africa.

Our delegation was led by Lolade Abiola, Programme Manager, ETO Nigeria and Africa REMI lead, who spoke about the importance of localizing renewable energy manufacturing on the continent, diversifying the renewable energy component value chain, developing a green workforce, supporting the growth of African manufacturing and the cooperation between the Global South (China especially) and African Countries. The keynote presentation focused on the enabling policies, demand profiles and infrastructure within each country as well as regional trade opportunities available for businesses looking to invest in localization on the continent.



Opening remarks by Lolade Abiola (Programme Manager, ETO Nigeria and Africa REMI lead) SEforAll, May 2023

Contributions from the session centred on the need for policy adjustments to support the renewable energy manufacturing drive, consensus building from African leaders, economic incentives to support investment, rallying financial institutions to unlock existing potentials, and development of technical capacity of the labour force.

The key outcomes from the session were the following:

- The clear potential for South-South cooperation given the scale of demand and the ambitious drive of African countries to increase energy access and transition to cleaner sources of energy as well as the growing need of Chinese companies to diversify into other regions with growing RE markets.
- A partnership between CREIA and the renewable energy associations in Nigeria, Ghana and Kenya to share contacts of their members and serve as a source of connection between more businesses across China and Africa is welcomed.

- Networking post-event highlighted significant appetite and interest in developing manufacturing capacity in Africa from Chinese manufacturers and the need for support in navigating local policies and regulatory environment.
- Expedited development of a training programme to support the growth of the requisite RE manufacturing workforce.
- Further engagement with the African manufacturers from Ghana, Kenya and Nigeria is necessary to understand their business expansion needs.
- Additional interest in countries such as South Africa, Egypt and Morocco to identify further areas of cooperation with China under the programme.



Presentation delivered by Miao Hong, Director, Sustainable Investment Program, World Resources Institute

The roundtable event was followed by a networking session, offering an opportunity for African delegates and Chinese manufacturers to discuss various areas for collaboration. We facilitated several conversations amongst the roundtable participants. These included:

- **Nayo Tropical (Nigeria)** are advancing discussions on a potential partnership for a battery and inverter assembly plant in Nigeria. We were able to further facilitate discussions resulting in a preliminary agreement to move forward with the partnership during the conference.
- **Sora Green (Nigeria)** have an agreement in principle to set up a factory to assemble batteries in Nigeria.
- **Translight Solar (Ghana)** made several connections with Chinese battery manufacturers and discussed the potential for future collaboration in Ghana.

Chinese manufacturer facility tours

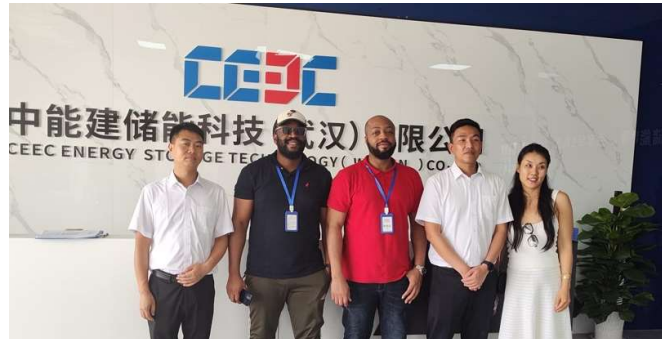
China's photovoltaic companies have a market share of more than 40% in the global photovoltaic market and over time have become one of the most significant actors in shaping the global photovoltaic market. While at SNEC2023, we were able to visit several notable Chinese equipment manufacturers, which had indicated interest to expand into Africa. These included:

China Engineering Energy Corporation (CEEC) Energy Storage Technology Co Ltd – Wuhan: China Engineering Energy Corporation Energy Storage Technology (Wu Han) Co Ltd is a Chinese state-owned energy conglomerate, manufacturing a diverse range of energy solutions and components. We were invited to tour their lithium-ion battery assembly factory and were shown the entire end-to-end-process of battery assembly in order to demonstrate the factory standards as well as to recommend assembly stages where African manufacturers looking to scale can initially commence assembly and then phase into more complex manufacturing activities.

In addition to showcasing the technical assembly and manufacturing process, we were also shown an extensive research and development facility required to ensure quality control of the lithium-ion assembly process.

Key outcomes from discussions and the visit to the CEEC facility were as follows:

- CEEC expressed willingness to set up manufacturing facilities in Africa and stressed the need for access to a skilled workforce given the highly mechanized process of the manufacturing process.
- Support in strengthening supply chain partnerships across the production value chain, from electrode manufacturing to cell finishing. It was mentioned that backward integration may become necessary to avoid disruptions.
- Power infrastructure was mentioned as a critical aspect to the manufacturing process as uninterrupted power supply is required for seamless manufacturing.



SEforALL Delegation visit to CEEC in Wuhan, China (Somkele Awa Kalu- Finance Specialist, Uche Honnah Jr, Energy Specialist Universal Energy Fund and CEEC team)



CEEC Lithium-Ion Battery facility, Wuhan, China

Sinomach China Machinery Engineering Wuxi Co Ltd: Sinomach China Machinery Engineering Wuxi Co Ltd (a wholly owned subsidiary of China Energy) was established in 1987 and is a comprehensive state-owned enterprise, specializing in the manufacture of solar home systems and solar PV modules. The company has been manufacturing since 2004 with an annual capacity of 540MW. The factory team demonstrated the process flow for the fabrication of PV modules, which required numerous assembly procedures and rigorous testing at multiple intervals.

Key outcomes from discussions and visit to the Sinomach facility were as follows:

- Sinomach confirmed that they already have existing investments in Kenya and are willing to further expand within Kenya and into other African countries under the Africa REMI programme.
- Sinomach stated the need for trained workforce to handle machinery used in the manufacturing process for PV panels and confirmed its willingness to train engineers in China for 2-3 months at its facility.
- Require access to an industrial zone with adequate infrastructure and export/import facilities as an ideal location for a future manufacturing plant.
- Sinomach confirmed they are willing to work with companies in Africa that have experience in the field of RE as well as manufacturing.
- Some of the assembly processes shown at the facility are labour intensive and as such will provide job opportunities for less technical job profiles.
- Framing of solar PV modules was suggested as an initial phase of assembly for African manufacturers to commence operations while capacity is being developed.



Visit to Sinomach, Wuxi, China

Successes

- The International Photovoltaic Power Generation and Smart Energy Conference & Exhibition held in Shanghai has been recorded as the largest event of its kind, attracting over 500,000 participants. Delivering a keynote speech during the Global Green Energy Leaders dialogue provided an ideal platform to introduce the Africa REMI programme to a significantly large and diverse audience in China, which included government officials, representatives from international organizations, financial institutions and entrepreneurs.
- Endorsement of the initiative by the Consul General for the Nigerian Consulate gave further emphasis of the in-country support of the programme and willingness of the government to support and facilitate our efforts under the Africa REMI programme.
- The roundtable and matchmaking session yielded successful connections between the African delegation and Chinese manufacturers willing to partner and diversify within the continent.
- The success of the roundtable led to bespoke tours organized by manufacturers looking to work with us to set up manufacturing facilities within Africa.

Next Steps

- Actively support partnership discussions off the back of Shanghai business roundtable event and set up follow up calls with all African participants.
- Leverage SEforALL in-country presence (Energy Transition Offices in Ghana, Nigeria & Kenya) to support on government engagement, policy and enabling business reforms to facilitate support for Africa REMI partner companies.
- Engage with Chinese manufacturers that were visited and connect them with African companies looking for manufacturing partners.
- Connect CREIA with renewable energy associations within African countries to develop a catalogue of member companies to be disseminated between Chinese and African members to facilitate further potential partnerships.