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MANUFACTURING AFRICA

Manufacturing Africa aims to reduce poverty in Africa by attracting £1.2 billion of foreign direct investment into manufacturing and creating 90,000 jobs over 7 years (2019-2026). The programme is funded by the UK government through the Foreign, Commonwealth & Development Office (FCDO)



PAN AFRICA STUDY – POTENTIAL FOR BATTERY-RELATED MANUFACTURING IN AFRICA

Helping to understand the potential to localize parts of the battery value chain in Africa, and identifying the countries and value chain steps with the highest potential

Across the world, the rise of electric vehicles (EVs) and renewable energy storage are accelerating the demand for batteries. Led by China, the USA and Europe, battery demand is expected to reach 4.9 TWh by 2035. Africa's projected share of global demand is small (~0,1%), but the continent has big potential for battery-related manufacturing, particularly in refining, cell production, and battery pack assembly. Our research shows that Africa could be cost-competitive in these areas, positioning it as a crucial player in the global market.

From May to July 2024, a team undertook a detailed analysis to identify potential opportunities for battery-related manufacturing in Africa. Two stakeholder workshops with 40+ participants were held during the study, and a final written report was socialized after the study ended

THE CHALLENGE

Africa has several strategic advantages, incl. abundant raw materials (e.g., lithium, cobalt, nickel), access to major markets through trade partnerships with the USA and EU that allow for low or tariff-free access, and growing government and investor support. However, the continent currently refines little of the critical materials required for battery manufacturing, and only two countries (Morocco, South Africa) have secured investors to manufacture batteries locally

As the USA and EU seek to reduce reliance on Chinese imports, Africa has an opportunity to become a key player in the global battery supply chain.

Images shown are for illustration purposes only

OUR SUPPORT AND IMPACT

Out support included 4 main activities

I. ASSESS THE BATTERY OPPORTUNITY

We assessed global demand and supply for batteries up to 2035, understanding the shifts in supply dynamics and opportunities for countries to enter manufacturing. We undertook a bottom-up market sizing of Africa's two main end-uses for batteries: electric 2/3 wheelers and stationary storage. We then scanned the battery-manufacturing value chain, from mining to recycling, to identify the critical success factors at every stage.

Global battery demand and supply

We analyzed global battery demand up to 2035, understanding the most important end-uses, regions driving demand, and battery chemistries. We also identified current and expected shifts in global supply, opening up opportunities for other countries

Bottom-up sizing of African demand

We undertook a bottom-up market sizing to estimate African demand in 2030, based on the two main end-uses: electric 2/3 wheelers and stationary storage. This enabled to confirm that local demand (7GWh in 2030) would be insufficient for a local Gigafactory at scale, and Africa would need to target export markets if it were to manufacture batteries locally

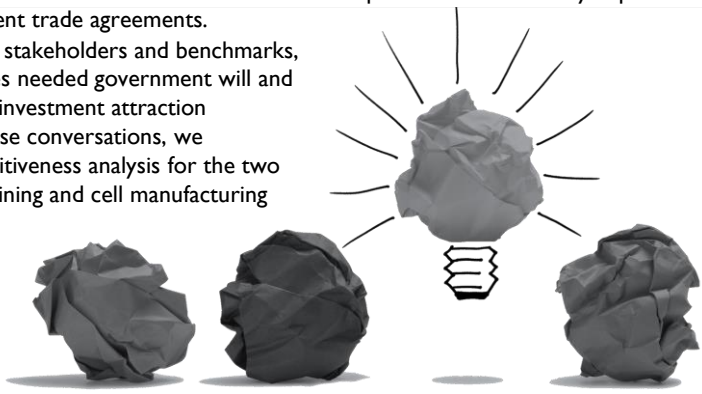
Critical success factors at each step of the value chain

We analyzed key success factors for countries and companies at each step of the battery value chain. Combined with our market analysis, we were able to identify the three most promising manufacturing steps for African countries: refining, cell manufacturing, battery pack assembly

2. OPPORTUNITIES FOR AFRICA

We assessed all 54 African countries and identified the 21 that has the most potential for battery manufacturing, according to several criteria. After this, we assessed the potential of the 21 countries at each step of the value chain – we had 14 grids in total, as we looked at different metals, battery chemistries and battery end-uses. We then also assessed these countries' potential to access key export markets (EU/US) through their current trade agreements.

Through conversations with experts, stakeholders and benchmarks, we came to understand that countries needed government will and support to develop these large-scale investment attraction manufacturing projects. Based on these conversations, we undertook an additional cost competitiveness analysis for the two most promising value chain steps: refining and cell manufacturing



2. OPPORTUNITIES FOR AFRICA (CONTD.)

Cost competitiveness

We assessed that African countries could be cost competitive for refining and cell production. Refining could be 30-35% cheaper in Africa, if mining-refining were integrated. LFP cell production costs could be on par with Europe, which subsidises its domestic production.

Access to markets

We assessed the main trade agreements and partnerships that exist between African and the EU. Combined with an analysis of current shifts in legislation, we identified that the US was best suited for exports of refined materials, whilst the EU was suitable for all steps of the value chain, provided goods were cost competitive and made with renewable energy

3. STAKEHOLDER ENGAGEMENT

We engaged 40+ stakeholders during two workshops, in the middle and at the end of the study. This enabled us to present intermediary findings to a group of private sector representatives, academics and international development partners. This enabled us to socialize our work, preparing stakeholders for the launch of our final report, but also gather feedback and additional insights from people active in the space

We engaged extensively with public and private stakeholders (incl. international organisations) to identify key opportunities and challenges for battery-related manufacturing in Africa

Hosted 25+ one-on-one interviews with private sector companies, investors and international development partners working on batteries in Africa

Drafted an end-of-project report that will be published by FCDO and the Faraday Institute

4. IDENTIFICATION OF TRANSACTION FACILITATION COMPANIES

To help Manufacturing Africa achieve it's programmatic goals, we identified 9 companies that could be opportunities for the transaction facilitation teams. Most of these companies were either in refining or battery pack assembly, and spread across the continent.

This programme is funded by UK aid from the UK government; however, the views expressed do not necessarily express the UK government's official policies.

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