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Africa's transition from a provider to a key actor of the global energy transition

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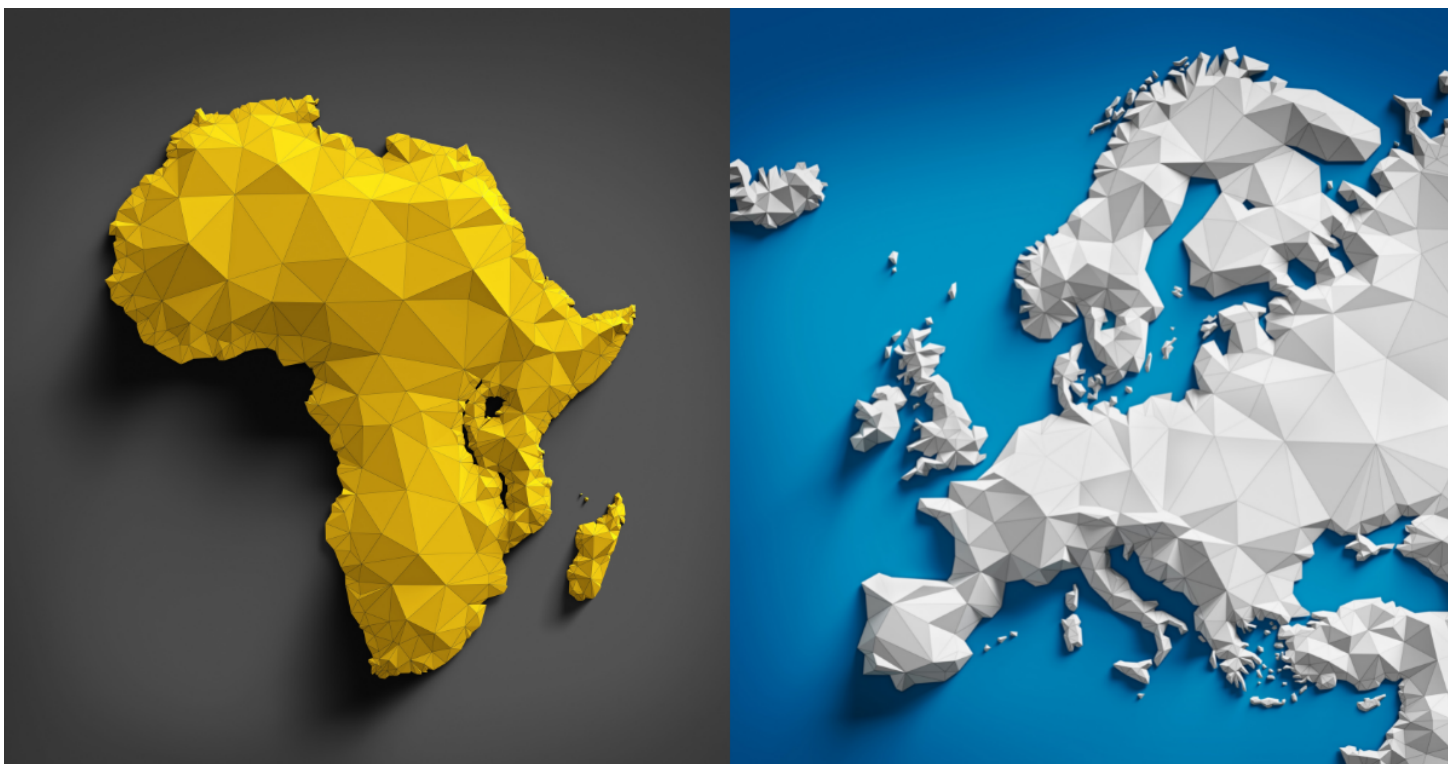
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Innovation for the energy transition is given a prominent role in the green recovery action plan for Africa and the European Union's Green Deal, with both continents seeking the transformation of their economies to tackle both climate change and the COVID-19 pandemic impacts while improving wellbeing of the population. There are many points of overlap between the two continents' official agendas. But there are also many open questions and potential tensions especially around: access to energy for sustainable and inclusive industrial development; maintaining competitive value chain; addressing trade barriers; promoting knowledge transfer while protecting intellectual property rights; using gas, and promoting hydrogen. If well-managed, innovation for the energy transition can act as catalyst for a shared prosperity for the two continents. This blogpost was written by the members of the [Ukama Platform](#)'s steering committee ahead of the European Union-Africa Union Summit (February 17-18).

Cooperation between the two continents must therefore be established on the basis of a shared understanding of what could be a fair share of the value and jobs. While international policy discussions acknowledge Africa's key role as a provider of energy for industrial development outside of Africa, these discussions should instead focus on how the continent may maximize the benefits of the clean energy transition to establish sustainable industries (of energy technologies and production, but also more generally) in African countries. That changes thoroughly the perspective about the conditions and production arrangements that are necessary, in African contexts, so that local energy production triggers the industrial development that is needed.

The transition needed in energy systems in African countries is therefore less about importing new technologies than ensuring innovations in the local productive arrangements that link new and low-carbon sources of energy to industries. The innovation process should relate to: business models, funding models, the link between energy production and industrial production, the regulatory framework, the role of utilities and cooperatives, the role of local authorities and in public service delegation agreements. It is more about the energy distribution and use side than only focusing on upscaling the production. Net-zero energy industrialization is rooted in new forms of energy

production, more decentralized, new forms of energy efficiency, as well as new types of energy uses, with soberness. It is also about linking large-scale projects and forms of social innovation in informal sectors. Thus, the arrangements linking energy production and consumption for productive sectors will be radically different from fossil fuel: this is the nature of the innovation we need!

Why does promoting sustainable energy innovations matter? First, without innovative local production arrangements, the path dependency on fossil fuel models supporting industrial sectors will prevail and lock the African countries in an unsustainable industrial development path. Second, innovation on local production arrangements would prioritize responding to local sustainable development needs over exporting the energy produced. Third, it is also going to be innovative in the way local companies, from startups to SMEs to cooperatives, utilities and larger industries, participate in global value chains: this exposure to and cooperation with international players is central for their capacity to innovate, and capture more value. Securing the conditions for this to happen is key, in particular when it comes to potential regulations that could function as non-tariff trade barriers preventing such innovations. It is therefore important to clarify what is the envisioned upgrading (local companies move to higher added value activities) or downgrading dynamics for different segments of the supply chain established in African countries. This clarity is needed so as to maximize their usefulness for jobs, income creation and social inclusion, and to manage their spillover effects in the emergence or strengthening of the local industrial ecosystem.

What needs to happen to make this shift in perspective a reality?

First, African states need to tune their innovation policy and strategies in line with their industrialization strategies. Critical, short-term conditions for the necessary local arrangements of the energy transition include: ensuring a sufficient allocation of public resources to national research and innovation systems, as well as the enabling conditions for private investments in innovation; developing a strategy and planning for research and innovation adapted to the national specificities; developing a critical assessment framework for new technologies and innovation, including informal, frugal and social innovation; and support by EU players can play a critical role for the long-term deployment of national research and innovation systems.

Second, actions should be taken to trigger the right transformation in the short term, in order to leapfrog directly to low-carbon and net-zero energies and their uses in industries and ensure their attractiveness for investors: regulation of the power and energy sector to avoid staying locked in fossil energy procurement; ensuring that alternative options to grid system can be taken up in national regulatory and legislative systems; ensuring that innovative arrangements and business models at local scale can be experimented and their performance evaluated, in order to feed possible evolutions in the regulatory framework; assessing the social relevance of technologies; ensuring competition rules and critical regulations like feed in tariffs are designed in order to avoid unfair advantages by incumbents or dominance effects even in the political economy of renewables themselves. This strategy of opening to alternatives arrangements should also be prioritized by EU funders, public and private, EU companies from the energy sector, as well as from the technology or digital sector, and from other industrial sectors for which the use of energy will be critical (for instance, steel, cement, chemical industries), when they intervene in African countries.

Lastly, there is a need to clarify the mid- to long-term vision and pathways for supply chains agreements involving African and European companies. Innovations in organizational arrangements and business models will be key to identify win-win solutions, and to avoid a zero-sum game in the share of value and jobs along the value chains that will link European, African, but also other third-party players often providing the technology itself (like China for solar technologies). Barriers to the capture of jobs and opportunities for industrialization by African countries should therefore be identified in advance in an open and explicit dialogue, so that they can be lifted early enough to ensure a clean energy transition that promotes productive value addition and transformation in a socially responsible manner.

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