



Summary policy brief on low carbon competitiveness in Kenya

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The stated aim of Kenya's Vision 2030 document is to create a globally competitive and prosperous nation with a high quality of life by the year 2030. Over that period, our analysis suggests that climate change, international mitigation, and natural resource scarcity will transform global trade patterns, resulting in an inevitable shift to a low carbon global economy. What will this look like? What impact will it have on Kenya's competitiveness and growth, and the potential to achieve the goals set out in the Vision 2030 document? What threats and opportunities will it create? And how should policymakers and businesses respond?

Our analysis suggests that:

1. Increasing natural resource scarcity – particularly relating to energy, land and water, and partly driven by economic growth in the emerging economies – could result in:
 - Higher energy prices, reducing the competitiveness of energy-intensive industries in oil importing countries like Kenya.
 - Increased competition for land and water, which is likely to boost the returns to Kenya's land assets and agricultural production, but also increase pressure on already stretched resources.
2. Mitigation policies introduced at the global level or by trading partners are likely to affect export opportunities and import prices faced by Kenya. For example:
 - Requirements for carbon footprinting of products and imports, as currently being discussed in the EU for example, could reduce access to markets for energy-intensive or uncertified products;
 - Carbon taxation in richer countries could lead to energy-intensive industries shifting to non-mitigating countries, generating economic opportunities but also undermining the potential to achieve low carbon growth;
 - Increased climate finance may become available to support the development of new green industries such as renewables (most likely from public funding sources in the short term, given the slow development of carbon markets), but may only be targeted at countries which can demonstrate a low carbon growth trajectory.
3. The impact of climate change will be significant for some sectors - for example:
 - It will reduce yields and productivity of some agricultural crops, undermining competitiveness.
 - It will reduce the reliability of hydropower as a source of energy - on which Kenya is currently heavily reliant – with implications for industrial development and efficiency.

This report examines how these issues could play out in Kenya over the next decade, particularly focusing on the energy, manufacturing and agricultural sectors. It identifies opportunities and threats to Kenya's competitiveness and growth, and discusses possible policy responses.

Energy

Kenya is at a crossroads in terms of its energy system. Until now, the high and variable costs, the limited availability and the unreliability of energy have significantly undermined the competitiveness of Kenyan business and hampered industrial development. However, with multiple renewable energy opportunities now being developed, Kenya could in future find itself in the enviable position of having one of the greenest energy sectors in the world. That would be likely to yield a significant competitive advantage in a future low carbon global economy, as well as attracting potentially large amounts of climate finance.

Some firms in Kenya are at the forefront of innovation to secure alternative, renewable sources of energy for their own use and to sell to the grid, generating additional income sources. Opportunities include mini-hydro, geothermal, solar, biogas, and cogeneration. Policy could encourage companies to take advantage of these opportunities, to enhance competitiveness and improve the energy supply, thus promoting the transformation to a low carbon growth trajectory in Kenya. Such investment would also allow the development of a more decentralised system of provision that could underpin private sector development and growth in previously underserved areas of the country.

With the recent discovery of fossil fuel reserves, however, Kenya has some strategic decisions to make about the use of those reserves once their viability is confirmed, decisions that will have major implications for the future energy mix and competitiveness of industry. It will be important to utilise the reserves and the revenues they generate in a way that supports rather than weakens incentives for renewable energy development, and thus promotes Kenya's long-term competitiveness in a low carbon global economy.

Possible policy responses:

1. Continue to support renewables development and capitalise on innovation by individual firms to enhance the supply of renewable energy, by creating an enabling regulatory framework. Reward firms for investing in alternative energy solutions, through appropriate feed-in tariffs, the establishment of mini-grid frameworks, and net metering mechanisms for example.
2. Build industrial development strategies around renewable energy sources. For example, investment in infrastructure and other market support structures in areas near geothermal fields, and the establishment of partnerships with private investors to further expand geothermal generation, could be complemented by additional incentives and promotion efforts to encourage industrial relocation and attract FDI to those areas, which will in turn enhance the returns to investment in geothermal generation.
3. In order to ensure Kenya's competitiveness in a future low carbon global economy, utilise Kenya's domestic fossil fuel reserves (if their commercial potential is confirmed), in ways that support the development of renewable energy e.g. by exporting the fossil fuels and investing the revenues in renewables. Specify a clear direction for energy policy in order to avoid undermining incentives for private investment in energy generation – particularly of renewables – due to ongoing policy uncertainty.

Agriculture

Kenya's economy is highly dependent on the agriculture sector, yet it faces significant threats from climate change, environmental and carbon-related certification and labelling, increased competition for land, high and rising energy and transport costs, and new sources of competition from other countries. There are various solutions to these challenges, however, and new opportunities that could be grasped, which would position Kenya to compete effectively in a low carbon global economy.

Possible policy responses:

1. Support and promote efforts to measure the carbon footprint of agricultural production, capitalising on private sector innovation in this area, in order to incentivise improved soil carbon sequestration, which will enhance competitiveness and ensure ongoing access to export markets in a future low carbon global economy.
2. Proactively establish Kenya's green credentials on international markets, by introducing and enforcing domestic standards and working with private players in the value chain to develop and obtain internationally recognised product labels. Invest in the necessary market institutions such as certification bodies and testing laboratories.
3. Support farmers in the transition to sustainable agricultural practices and climate resilient production methods, in order to enhance yields, capitalise on rising food prices, and ensure long-term sustainability. Invest in research, demonstration projects, and awareness raising activities, and enable farmers to learn from practice in neighbouring countries.
4. Capitalise on rising food prices and competition for land and the bargaining power that gives Kenya vis-à-vis international investors, by regulating private investment in land (and agriculture) to ensure its productive utilisation and associated employment creation, and to maximise potential spillovers to the rest of the agricultural sector to enhance yields and competitiveness.
5. Analyse the market potential of different biofuel crops – particularly dual crops such as sugar, cassava, sweet sorghum, or castor, rather than *Jatropha* – to generate higher incomes and more diversified livelihoods for farmers, and to promote food and energy security.

Manufacturing

The high price, limited availability and unreliability of energy have significantly undermined the competitiveness of Kenya's manufacturing sector to date. However, as firms are responding by increasingly innovating to find or generate alternative sources of energy, as noted in the energy section, this could well become a significant competitive advantage in a global low carbon economy facing rising energy prices. Energy-efficiency measures are another important way to promote competitiveness, and impressive cost savings – as well as emissions reductions – have been achieved by Kenyan companies adopting such measures.

Many manufacturing firms use fuel wood as a source of energy, and this is a significant driver of deforestation, which is becoming increasingly unsustainable as biomass resources are depleted and prices rise. Some manufacturing firms are investing in land and planting trees with a view to managing the forest sustainably and securing an ongoing source of timber for fuel, thus reducing their own vulnerability to rising and fluctuating energy prices. Such private management of forest resources, perhaps supported by an appropriate incentive mechanism and regulatory framework, could provide a possible model for sustainable forest management in some areas.

Environmental standards, carbon footprinting and associated certification may become requirements to access certain international markets for manufacturing products in future. Thus, appropriate environmental regulation and standards within Kenya will help to ensure the sector remains competitive.

There are also some specific threats to energy-intensive manufacturing industries such as cement, from growing global energy prices and potential future international mitigation policies, and this is driving innovation internationally. It will be important for Kenyan companies to keep up with this technological progress if they are to remain efficient and competitive. Multinational companies can often be first adopters of these kinds of innovations, which can yield spillovers for local firms.

There are also opportunities for new manufacturing industries to develop, for example in renewable energy appliances. Given Kenya's political and economic position as a gateway to East Africa, it is well placed to attract

foreign direct investment into these new industries, if the investment climate is right. Dialogue with possible future investors in high potential sectors can help to identify areas where reform may help to attract FDI.

As noted in the energy section above, while some effort has been expended developing projects that incorporate finance from carbon markets, in practice this unfortunately now seems unlikely to yield much finance in the short term, and Kenya is no longer eligible to access CDM in any case. However, support and incentives for the kinds of investments discussed here, which are linked to a wider business case based on energy prices, could yield better results. Given the level of innovation that is already being exhibited in Kenya, it is well positioned to secure public climate finance to support these kinds of investments.

Possible policy responses:

1. Enforce regulations regarding energy-efficiency audits. Advertise the financial benefits of energy-efficiency measures more widely to raise awareness amongst the business community and trade associations. Engage with financial providers to raise awareness about lending opportunities for energy-efficiency measures that yield positive returns, and share risks through loan guarantees.
2. Identify the most energy-intensive sectors and incentivise innovation to reduce emissions, in order to remain competitive in a low carbon global economy. Possible measures include standards, reporting, sustainability awards, fiscal incentives, or self-regulatory mechanisms.
3. Identify opportunities for new manufacturing industries that Kenya has a realistic potential to develop – for example, the production of renewable energy appliances such as solar water heaters. Consult with business to create an appropriate climate for such investment, for example through the introduction of building codes and regulations that will help to develop the domestic market for such products, and through investing in the necessary skills development.
4. Explore the economic and political feasibility of private management of fuel wood plantations by industry as a possibly sustainable solution to dwindling fuel wood reserves, and assess the regulatory frameworks and governance structures required.

