THE ROLE AND IMPACT OF PPPs IN FINANCING ENERGY INFRASTRUCTURE

THE CASE OF KIPETO WIND POWER PROJECT


KENYA

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1 INTRODUCTION

Kipeto Energy PLC was established in 2009 as a Public Private Partnership (PPP) to develop the Kipeto Wind Energy project. The PPP brought together African Infrastructure Investment Fund 2, International Finance Corporation and Craftskills Wind Energy International Limited.[1]

The project was funded by the US government via the Overseas Private Investment Corporation (OPIC) to the tune of USD 233 million in senior debt, in addition to USD 88 million of equity from shareholders Actis (88%) and Craftskills Wind Energy International (CWEIL) (12%). The construction has been completed and the project was commissioned in July 2021, with an estimated capacity of 102 MW from 60 wind turbines.[2]

There has been a global shift, championed by the World Bank to encourage more private sector entities in essential public service provision.[1] Public private partnerships (PPPs) are medium- or long-term contractual agreements between the state and a private company which involves delivering or public services and infrastructure.[2] In addition, it has been acclaimed to be the most preferred for green energy financing. The need for Kenya to revolutionize into an industrialized country has seen a lot of focus in energy infrastructure which is believed to drive development in the country. Energy infrastructure is the generation, transmission and distribution of electricity. Kenya is on the journey to move to 100% renewable energy which increasing energy production. Kipeto Wind Power project is viewed as an enabler for this.

PPPs have been on the rise, especially in low-income countries. The trend can be linked to the global support originating from high income development partners. Over the past decade, G20 countries have consistently pushed the need to scale-up infrastructure investments by involving the private sector in large transformational project. Development banks, in response, have adjusted their financing models to prioritize infrastructure PPPs.

PPPs are touted as having the ability to improve access to electricity, stimulate local economic development, develop human capital, create employment Improve environmental quality, promote local and foreign investment and trade and fuel business productivity and expansion. However, PPPs also come with inherent risks to the governments, local communities where the projects are being implemented and to the

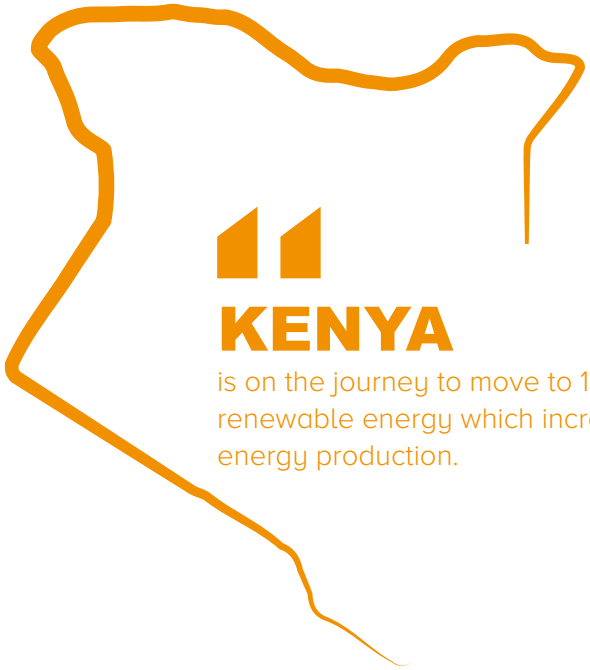
1 https://ppp.worldbank.org/public-private-partnership/overview/ppp-objectives

private sector. PPPs create development risks, bidding risks, construction risks, political risks, environmental risks, technological risks among others.[2]

The findings show that while outcomes have largely been positive. Through CSR programs, the project has provided better healthcare system for the community in Kipeto, developed vibrant schools, and increased access to energy through home solar installations. The project has a 20-year Power Purchase Agreement signed with Kenya Power and Lighting Company. Part of the earnings will be distributed to shareholders and increase the socioeconomic status of the people around Kipeto.

On the contrary, Kenya does not have a strong legislative, policy and institutional structure for PPPs in the energy sector. The study seeks to identify some risks associated with procurement regulations, power purchase agreements, project implementation agreements, and tariff policies. Robust legal, policy and institutional frameworks should be developed in tandem with the ongoing promotion of PPPs as the panacea financing renewable energy projects.[3]

With specific reference to the Kipeto Windfarm Power Act should this report seeks to give a critique of the current approaches to and prospective plans for infrastructure development in energy as well as alternative visions of infrastructure governance and development. The critique will provide questions and answers around; (i) cost-effectiveness and risky[4] transfers, (ii)socioeconomic development out comes, (iii) impacts on democratic governance, (iv) integrating environmental considerations in infrastructure investments.



2 Klein, M. 2015. "Public-Private Partnerships: Promise and Hype." Policy Research Working Paper No. 7340, World Bank, Washington, DC.

2 METHODOLOGY

The Kipeto Wind Power project case study was produced using desktop reviews of project documents, available information on development framework policies on PPPs, policy recommendations and best practise that guide PPPs in energy infrastructure. For more in-depth analysis, additional data was collected through telephone correspondence with company officials, a site visit and face-to-face interviews with senior company officials, landowners, community members, Kajiado County government officials and local leaders from Kajiado and Esilanke areas.

The research used a focus group interview and the group comprised of both male and female land owners. 10 homesteads were visited belonging to both landowners who are part of the project and those who are not part of the project. Random interviews were equally conducted with persons grazing or travelling through the project site.

Multiple stakeholders are involved during project development for PPP financed projects, all of whom are interested in the performance of the project. It is the belief that PPPs should provide exceptionally good service and very low costs when compared to public projects.

This study provides an overview of wind energy sector developments and financing structures, with specific focus on the Kipeto Wind Power public private partnership (PPP) project; analyse the governing legislative, policy, and institutional frameworks; and critically examine the impact of the Kipeto projects in terms of cost-effectiveness and risky transfers, socioeconomic development outcomes, governance outcome, and environmental outcomes.

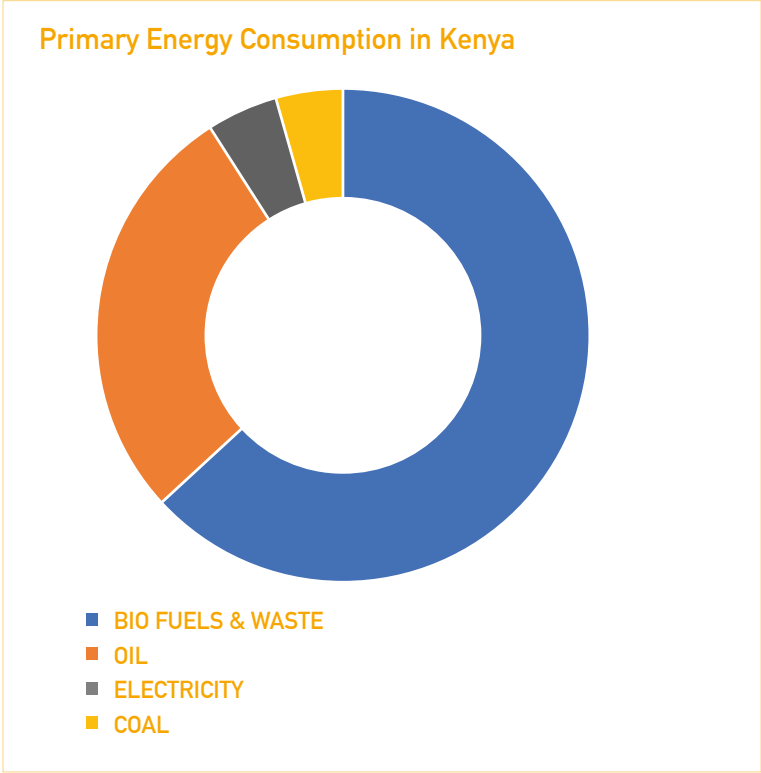
3 ENERGY SECTOR ANALYSIS IN KENYA

3.1 Energy Consumption and Electricity Generation

Energy is a key enabler of Kenya's Vision 2030. It is recognized as a central development activity under President Uhuru Kenyatta's Big 4 Agenda. The Third Medium Plan (2017-2022) under the Vision 2030, identifies energy as a driver needed to transform Kenya into "a newly-industrializing, middle-income economy, providing a high quality of life to all its citizens in a clean and secure environment." It is for this reason that the Ministry of Energy's mission statement is "to facilitate provision of clean, sustainable, affordable, reliable, and secure energy services for national development while protecting the environment."[5]

Over the past decade, Kenya has rapidly expanded the energy sector in response to growing demand; however, energy remains characterized by limited access, unstable and unreliable supply. The country's energy mix is dominated by traditional biomass, such as household utilization of wood fuel for cooking and heating. Biomass accounts for two-thirds of primary consumption, while 25% is oil, 4% is electricity, and 3% is coal, as presented in Figure 1.[6]

Figure 1: Primary Energy Consumption in Kenya by Source – 2017

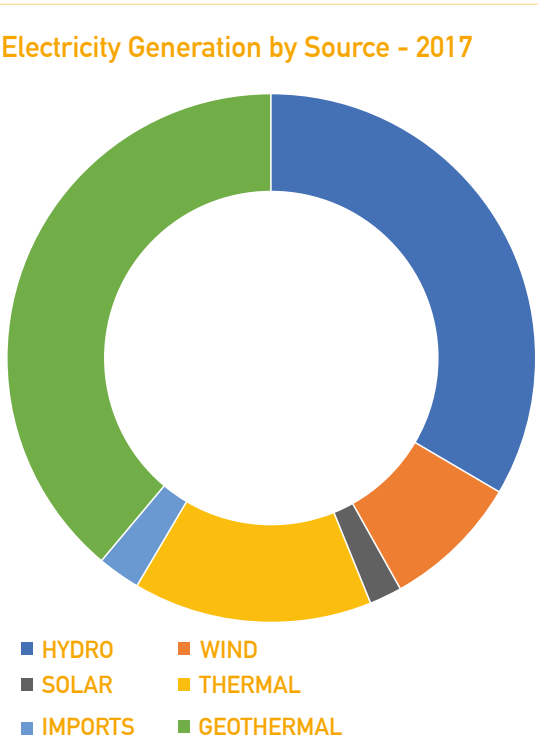


Source: Ministry of Energy, Kenya 2020

5 Ministry of Energy, Kenya, 2021. https://energy.go.ke/?page_id=439
6 Ministry of Energy, Kenya, 2020. https://energy.go.ke/wp-content/uploads/2021/03/2020_06-Kenya-Strategy-EE_LOW-1-1.pdf

Electricity, which accounts for 4% of primary energy consumption in the country, is generated from six main sources. As indicated in Figure 2, geothermal accounts for 44% of electricity production, 33% originate from hydropower plants, 11% of electricity is produced from fossil fuels and 10% come from wind power plants. The remaining 2% are either imported or produced from solar sources. It is projected that by 2031, hydropower will account for only 5% of electricity generation, with the majority of the electricity generated from geothermal sources. [7]

Figure 2: Electricity Generation by Source – 2017, Source



Source: Ministry of Energy, Kenya 2020

Kenya has been reducing its reliance on fossil fuels due to rising import expenditures which consume at least 40% of foreign exchange earnings as in the pie chart above. Fossil fuels are used for thermal power production. The government has been committed to a gradual phase-out of expensive electricity sources in favour of cheaper and cleaner energy. As a result, apart from geothermal, wind energy is increasingly occupying energy policy. PPPs being a clear enabler in ensuring Kenya attains its full potential generating cheaper and cleaner energy, the government has largely supported financing from private sector. Kenya has the largest wind farm in Africa. The Lake Turkana Wind Farm has a capacity of producing 310 MW.[8]

3.2 Wind Energy Sector Overview

The transition to prioritizing wind energy began in 2008 with the launching of the Renewable Feed-In Tariff (FiT) Policy. The primary aim of this policy direction was to promote the development of renewable energy resources. The current development of the FiT policy is the 2021 version. Together with the Energy and Petroleum Policy, they provided a framework for developing the institutional capacity for wide spread use of wind energy; continually reviewing and enforce regulations and standards for wind energy technology; collecting and compiling wind energy data and update the wind atlas; providing incentives for wind energy development; supporting hybrid power generation systems involving wind and other energy sources; providing a framework for connection of electricity generated from wind energy to national and isolated grids, through direct sale or net metering; planning and investing in transmission lines to facilitate evacuation of power from areas with high wind potential to major load centres and; undertaking Research Development and Dissemination (RD&D). [9]

In pursuit of these objectives, Kenya updated its Wind Resource Atlas in 2013, by collecting data from the 95 wind data loggers installed all over the country. The wind speed sensors were installed at a height of 20 and 40 meters above ground level. A Ministry of Energy analysis indicated that by 2018 onwards, the installed capacity would increase from the 25 MW to 1246 MW, with a bigger proportion of this coming from Private Investors, facilitated under the Feed-in Tariffs Policy (946MW) and the Least Cost Power Development Plan (300MW). [10] It is for this reason that at Kipeto Wind farm, the government embraced its development to enhance production of electricity that can be fed into the national grid.

7 Ministry of Energy, Kenya, 2020. https://energy.go.ke/wp-content/uploads/2021/03/2020_06-Kenya-Strategy-EE_LOW-1-1.pdf

8 Geothermal Exploration in Kenya- Status Report and Updates, 2019.

9 Ministry of Energy, Kenya. 2021. https://energy.go.ke/?p=343

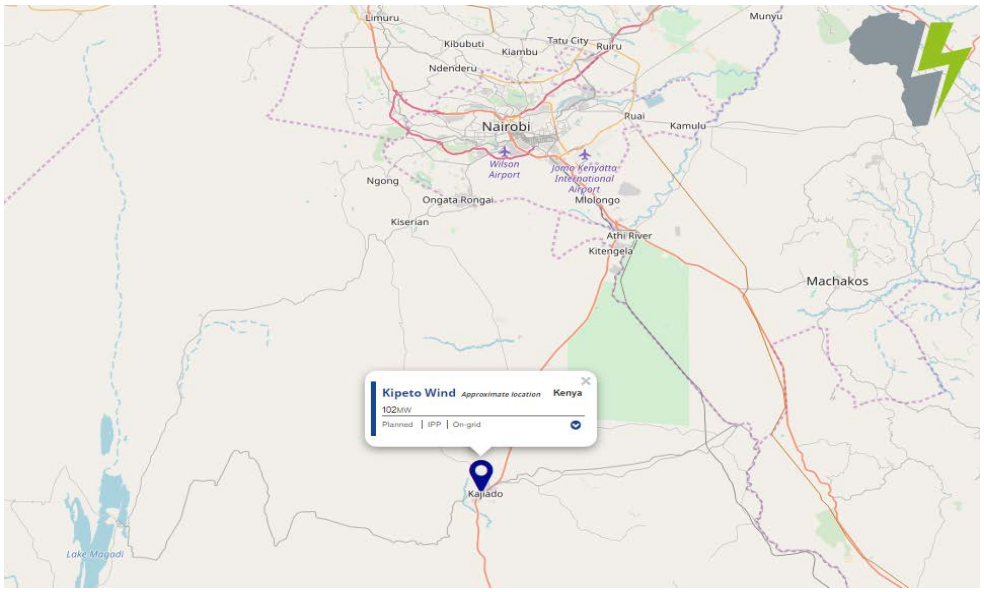
10 ibid

4 KIPETO WIND FARM A CASE STUDY ANALYSIS

4.1 Location

Kipeto Wind Farm is located in Kenya, one of the countries in Africa with the largest potential for wind generation, approximately 346w/m^2. Geographically, Kenya hosts a number of topographical features, such as the Great Rift Valley, which offer varying nature surfaces that promote wind generation. The North Western parts of Kenya, Marsabit and Turkana as well as the Coastal areas experience high wind speeds that can be tapped for energy generation. Kipeto Wind Power Project is located in the Great Rift Valley. Kipeto wind Power Project is situated in Esilanke area, Kiserian Division, Kajiado County, South West of Nairobi.

Figure 3: Map showing Location of Kipeto Wind Farm



Source: Google maps

The project covers approximately 70Km^2 of the territory inhabited by the Maasai community as in Figure 3 above. It is located in Kajiado County and is neighboured by Machakos and Nairobi counties. It is the second largest wind power project after the 300MW Lake Turkana Wind Power Project situated in Northern Kenya. The project is comprised of 60 wind turbine generators (WTGs) with an installed capacity of 102 MW.[11] The construction phase is 100% complete. It was commissioned in July 2021. The figure 4 below depicts the progress made at the plant. Power Africa recently celebrated the success of Kipeto wind farm as a result of a PPP financed energy project.[1]

Figure 4: Image of completed Wind Turbines at Kipeto Wind Farm

Source: https://powerafrica.medium.com/celebrating-clean-power-in-kenya-the-kipeto-wind-farm

4.2 Guiding Institutional and Legislative Framework

Kipeto Wind Farm is a project of Kipeto Energy Limited (KEL), also called Kipeto Energy PLC, formed from a partnership between African Infrastructure Investment Fund 2, International Finance Corporation and Craftskills Wind Energy International Limited. The project has been developed with financing from Overseas Private Investment Corporation (OPIC).

The equity partners for the Kipeto Wind Power Project include Africa Infrastructure Investment Fund 2 (AIIF2 – South Africa, Mauritius, 55%); Craft Skills Wind Energy International Limited Kenya, 20%; International Finance Corporation, 20% and Kipeto Community Trust, 5%. The US government via the Overseas Private Investment Corporation (OPIC) provided USD 233 million in senior debt to fund construction alongside approximately USD 88 million of equity from shareholders Actis (88%) and Craftskills Wind Energy International (CWEIL) (12%).[12]

Kipeto Energy Limited was formed as per the Public Private Partnership Act of 2013. The Act is the primary national legislation for PPPs. It stipulates in its second schedule the PPP arrangements that Kenya can get into. These include Management contracts, Output Performance based Contracts, Leases, Concessions, Build-Own-Operate scheme, Build- operate and Transfer scheme, Build-lease and Transfer Scheme, Build-Transfer-Operate, Develop–Operate-Transfer, Rehabilitate-Operate-Transfer, Rehabilitate-Own-Operate and Land Swap schemes.[13] At Kipeto Wind farm. The type of PPI is a Greenfield Project, the subtype of PPI is Build-Own-Operate Scheme.

The PPP Regulation of 2014 and Project Facilitation Fund Regulation of 2017 give a guide on how PPP arrangements work and the financing procedures respectively. The Fund provides financial support for implementation of PPP projects under the Act. It is usually provided in form of grants, loans or equity as approved by the Cabinet Secretary. Kipeto Wind Farm project's main funding comes from the private sector; Actis and Craftskills Wind Energy International while the source of revenue will be through Purchase Agreements.

The Act created a PPP Unit, a decision-making organ, under section 8 of the PPP Act 2013. It is a special purpose Unit within the National Treasury

11 https://kipetoenergy.co.ke/ 11 https://powerafrica.medium.com/celebrating-clean-power-in-kenya-the-kipeto-wind-farm

12 https://kipetoenergy.co.ke/about-us/

of Government of Kenya. Its focus is to serve as the Secretariat and Technical arm of PPP committee mandated with assessing and approving PPP projects in the country. The procuring authority includes a committee selected under the Act, a Unit and a Node member who are responsible for conceptualizing, identifying potential projects and undertaking the tendering process of the project. Reporting is done through the Debt Management Office and the committee approves.[13]

In regard to wind energy exploration as in the case of Kipeto Wind Farm, institutions responsible include the Ministry of Energy, Energy Regulatory Commission (ERC) which regulates pricing for energy, Renewable Energy Regulatory Authority and Kenya Power which distributes power to households for consumption. ERC will regulate pricing through Feed-in Tariffs and Kenya Power will sell the electricity generated from Kipeto Wind Farm.

The Kenya National Energy Policy of 2014's overall objective is to ensure affordable, competitive, sustainable and reliable supply of energy to meet national and country development needs. Some challenges posed by this policy in wind energy exploration include; high upfront cost, inadequate wind regime data, limited after sale services, inadequate wind energy industry standards due to changing technologies, competing interest in land use and potential areas of Wind farm development that are often far from the grid and load centres.

It is believed that stronger wind energy policies will significantly increase wind power generation. However, in Kenya, no explicit current wind energy policy exists. Kipeto Wind Power project mainly relies on policies guided by the World Bank Group and the investors involved. This therefore means that the government of Kenya has less jurisdiction when it comes to guiding principles towards the project. Legislation is important but it remains insufficient in the energy transition process by the Ministry of Energy in Kenya. Feed-in Tariffs are most considered due to its predictability and elimination of competition as a buy-in to the National grid.

5 IMPACT OF THE KIPETO WIND POWER PPP

5.1 Cost-Effectiveness and Risky Transfers

The Kenyan Vision 2030 developed in 2007 made a commitment to renewable energy targeting 23,000MW by 2030.[12] Kipeto Wind Farm is key in ensuring the above vision is achieved. With a 102MW capacity, it was expected to be operational by 2020 since it reached its financial closure at the end of 2018. The 60 turbines were successfully installed by June 2020. It was just recently commissioned into action on 5th July 2021 following a few months delay due to COVID-19.

It is worth mentioning that despite the lockdown and movement restrictions during the ongoing COVID-19 pandemic, Power Africa was instrumental in supporting Kipeto Wind Farm by providing critical data to BTE Renewables on the recovery of power and energy demand in Kenya once the restrictions were eased. The support from conceptualization to commercial operations is a clear indication of incredible achievement made through PPPs. It is safe to say that the project construction phase was well within its intended timeframe.[13]

Kipeto Wind power project is unique such that the African Trade Insurance Agency (ATI) will provide a 10 year standby revolving and on-demand insurance cover to protect the project against the risk of payment delays by the national off-taker. This shows that OPIC has taken charge of expected losses from the project. With the signing of the Power Purchase agreement with Kenya Power in 2016, It is expected that Kipeto will start generating and selling to the grid by December 2021.

More often than not, PPPs end up leaving citizens and the public sector facing higher costs, greater risks, less transparency and more complexity than the public alternative. It is important to note that the benefits that come with PPP financed renewable energy infrastructure include a spur in economic growth, job creation, enhanced national security, reduced pollution and protection of consumers from price spikes.[14] In this regard, the livelihood of communities and the country at large are significantly improved as in Kipeto Wind farm. The project has thus proven to have significant impact in value for money.

13 https://powerafrica.medium.com/celebrating-clean-power-in-kenya-the-kipeto-wind-farm-344ea9f92dee https://vision2030.go.ke/about-vision-2030/

14 http://www.parliament.go.ke/sites/default/files/2017-05/PublicPrivate_Partnerships_Act

14 https://www.nsenergybusiness.com/features/wind-power-kenya-challenges/

It must be noted that procurement procedures, bidding and contract awarding was entirely under the jurisdiction of Kipeto Wind Power PLC. There seems to be no evidence on public procurement procedures that ensure a transparent process. The finance and procurement team at Kipeto did not explicitly give information on this.

Some of the risks expected include those associated with bidding, procurement, construction, technology, operation and the ongoing costs are likely to be greater. At Kipeto Wind farm, the Kipeto Energy Limited (KEL) bears the risk as it is not explicitly clear, the Government's involvement in the project. As mentioned earlier, the financiers have put in place buffer systems to ensure that neither the government nor the local community bear any losses. It has on the flip side spearheaded the protection of endangered vultures in the area thus promoting ecological studies and research on the same.

5.2 Socio Economic Development Outcomes

Projects such as the Kipeto Wind Power Project should be informed by community needs and have sustainable development outcomes. Community engagement is critically prioritized when developing these programs in order for them to meet the needs of the people. In this instance, KEL took to CSR programs in order to benefit the larger community around the project site and Kajiado County. The Oloyiankalani Dispensary, a local health centre has been renovated through an investment of Kenya shillings 5 million.

5.2.2 Land Ownership (Leases, Shareholding and Community Trust)

It is common knowledge that any business entity has to ensure that the recipient community benefits largely by its presence. KEL understood this by investing in the social capital of the community aside from pursuing profits for its shareholders. This would ensure the success of the wind energy project. Including benefit sharing structures were put in place prior to consulting widely with the community. Instead of 'forcefully' acquiring or purchasing their parcels of land, KEL opted to lease the parcels.

The project area is situated mostly on private homesteads. In Kenya, the law allows for compulsory acquisition of Private land especially when the intended use is for provision of essential services like electricity generation. KEL initially considered this option. However, the community members exerted pressure for them to consider leasing which they agreed to. This unique approach guarantees a partnership through which the community buys-in to the project right from the start. Equally, community land rights are protected thereby the goodwill ensures the projects' success. The leasing approach has given the community land owners so much confidence to the point of depositing their land titles to be registered by the Ministry of Lands.

Leasing of land has proved the stability of the Kipeto Wind farm Project investment, the community member's land rights are protected and the government still gets to harness 100MW of electricity into the national grid – a win – win situation for all parties involved. An annual lease rate was agreed upon after serious negotiations. These would be paid during the project feasibility period as well as during the operationalization. The feasibility period lasted 7 years, running up to actual construction saw land owners receiving an annual lease rate depending on acreage. For instance, those owning 1-50 acres received Ksh 100,000 (US$ 1000), those with 51-100 acres Ksh 150,000 (USD$ 1500) and so forth. The incremental value of the parcels of land is 5% per annum. KEL has been diligent in paying up the leases in as much as the project is yet to be operationalized.

Importantly, 1.4% of the gross annual revenue generated by the project for each wind turbine located in one's piece of land will be paid to the land owner. An amount translates to Ksh 1.2 million (USD $12 000) annually for each wind turbine. A landowner, Ole Sankale mentioned that some will receive over Ksh 20 million annually for 20 years without having to part with their parcels of land.

In most projects, developers do not share profits with the local communities. More often,

they purchase locally available materials and conduct a few CSR programs.[15] It is unfortunate that Kenya does not have a law governing how communities can benefit from investors in their localities. Despite this, KEL still allocated a 5% share of the company to the landowners to promote ownership of the project without having to contribute any equity either. KEL proves to be quite the unique project with the very best laid plans.

The 5% translates to KES 100 million (US$ 1 million) annually - an additional income for the community, besides the land lease payments, which they will continue to receive. According to the KEL CEO, such a strong social capital approach requires a philosophical shift in the minds of project proponents from purely focusing on profits to embracing other interests. A Pastor, KEL community liaison officer who is also from the community in Kipeto and six landowners (including three women) concur, indicating in interviews that the allocation of company shares to the community is a good model that should be embraced by all investors. The model secures the investment while safeguarding the future for the community

5.2.2 Energy Access

KEL will not directly connect the locals to the grid despite it being a generator of power. The Maasai of Kipeto showed concern over this fact. However, it was clearly elaborated that it is the jurisdiction of Kenya Power Limited. Despite this, KEL has made efforts to provide solar power to the new houses that are being constructed as part of their relocation program.

Kenya will have an opportunity to produce more electricity and export that which is in excess supply. That means economic vibrance for the country. It is expected that the frequency of blackouts will significantly reduce. Countrywide, more citizens will enjoy unlimited supply of electricity.

5.2.3 Business Development

Kipeto Wind Power project has opened up Kajiado County to a myriad of business opportunities. The area has become a hot spot for sale of land. The value of land has significantly risen from Ksh 200,000 in early 2000s to Ksh 500,000 for a plot of land, for instance, an 1/8 of an acre. The real estate market in the area is definitely booming. Over 800 Jobs have been created in the project area especially for unskilled labour due to the high skills required to install the wind turbines[15]. The road network has equally expanded making access into the interior areas much easier. Over 200 families are expected to benefit directly form turbine revenue located on their parcels of land.

5.3 Democratic Governance Outcomes

Governance refers to the manner in which the institutional capacity of governments or their lack of affects the performance of PPPs. Generally, support for PPPs by low-income countries is rare especially those with strong political opinions. The investment climate heavily determines the impact on development of PPP projects.

5.3.1 Public Participation through Consultations

Kipeto Wind power projects is at the heart of Kajiado County, South West of Nairobi County. Led by a number of administrative units, KEL took the initiative and approached the community members of Kipeto through the lowest level of local administration, for instance, the chiefs and village elders. This bottom-up approach was advantageous to the investor in being able to sell their idea to the community. With the support of the local administration, the local community easily welcomed the project idea. Local NGOs and other key stakeholders were also consulted prior to the development of the wind farm.

KEL's Environment, Social and Governance Manager, independent of the legal requirements,

15 https://www.sciencedirect.com/science/article/pii/S136403211830861X

KEL understood that investing in social capital by fully and effectively engaging the community would be the only way the company would succeed. KEL took [16]full and effective consultation with the community as a moral duty rather than an obligation. A strong rapport was established even with the top management at KEL through the frequent visits made to the project site.

Interestingly, the Kipeto wind power project consultations were complicated, time consuming and required heavy financial investment. This is largely due to household land privatization as opposed to communal ownership. As such, the company had to negotiate with each landowner individually, then collectively as a community. The project design proved to be quite complicated when a landowner opted out at any stage. For instance, in order for the turbines to be linked, non-participating landowners had to be consulted as well to allow the power lines to pass through their parcels of land.

KEL respects and adheres to the plans of Kajiado County Development Plan whenever they propose to support any form of infrastructural development rather than impose. KEL's relationship with Kenya Power is equally smooth. However, no policies exist to guide their working relationship the power purchase agreement that was signed in 2012.

5.3.2 Grievance Mechanisms

A bottom-up grievance mechanism is in place starting at the household level. This enables the community members to raise any rising matters amicably through the company's community liaison officer. Should the issue fail to be resolved at the household level, a family meeting is called to resolve the issue. In one instance, for example, a family took a vote to decide whether to be part of the project. By a vote of 22 to 8, the family opted out of the project even though the family could have earned up to KES 12 million (US$ 120 000) annually, for twenty years, as direct revenue from the 10 wind turbines that could have been constructed on their land.

5.3.3 Transparency Issues

Kipeto wind power project was believed to do amazing things within the local community. However, it is not very transparent how processes took place during procurement and bidding. Most of it is based on hear-say.[17] Most materials for construction are reported to have been shipped into the country. That leaves room for questions as to whether local resources were utilized. So far, no reports of corruption have been made. The PPP lab however, through its report on PPP procurement of services of the project, does not clearly show a competitive process whereas a number of endorsements were made at the same time.

5.4 Environmental Impacts

The Environmental Management and Coordination Act Cap 387 (EMCA Cap 387) requires that any project likely to have a negative impact on the environment must undergo and Environmental Impact Assessment Study. Equally, continuous annual Environmental Audits (EAs) shall be conducted to ensure compliance with the licensing conditions.

Kipeto wind farm underwent a thorough Environmental Impact Assessment study for which it received its license. It also put up an environmental health and Safety department to ensure that all licensing conditions are met during the construction phase. And operation phase. This also ensures the safety and well-being of the workers is taken into consideration.

The Maasai community who inhabit Kipeto are semi-nomadic whose main livelihood is livestock keeping. The area around Kipeto neighbours Nairobi National Park. It is home to various wild animals like baboons, hyenas, leopards, and wild dogs. Human wildlife conflict is one of the major threats to wildlife conservation as well as community livelihoods.

KEL has developed a protection plan to address the case of human wildlife conflict within the windfarm and its environs. They have done this

16 https://www.esi-africa.com/renewable-energy/100mw-kipeto-wind-farm-connects-to-kenyas-power-grid/

17 https://www.esi-africa.com/renewable-energy/100mw-kipeto-wind-farm-connects-to-kenyas-power-grid

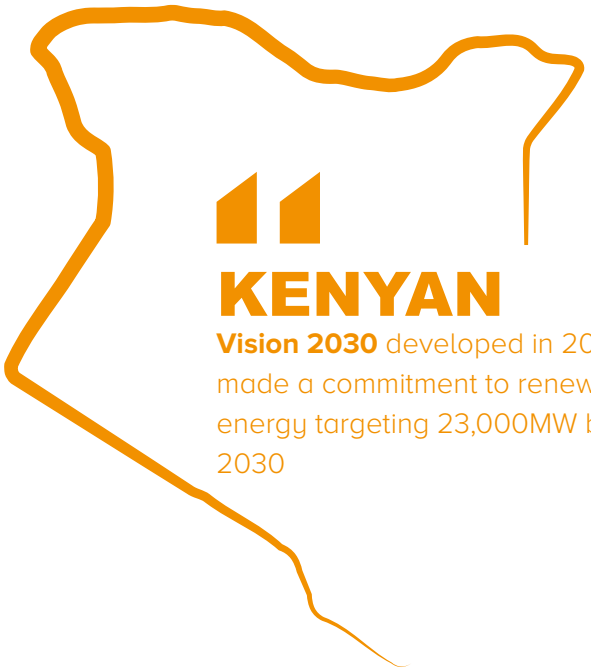
18 https://www.nsenergybusiness.com/features/wind-power-kenya-challenges/

by constructing predator proof fences for 10 homesteads so far. This helps to prevent the community from poisoning the wild animals as a result of attack on their livestock.

Equally, a vulture colony exists approximately 14km from the project site. These birds have been classified as 'critically endangered' by the International Union for the Conservation of Nature (IUCN). KEL is working closely with Ornithologists to ensure a 'net-gain' in vulture populations is achieved in Kipeto Wind Farm. Importantly, the Kenya Wildlife Service and the National Museums of Kenya are hands on to ensure the wildlife are protected at all costs. The vultures are captured in an agreed Biodiversity Action plan which complies to the IFC performance standards.

The vegetation around the project site is manly bushes and thickets hence deforestation was not done to pave way for the construction of wind turbines. The project being less intrusive onto the environment, there are nearly no negative environmental impacts aside form a little wildlife disturbance due to the development of the industrial wind park.

The landowners and broader Maasai community in Kipeto acknowledge some livelihood changes once the project is fully operational. Since the landowners started receiving lease payments, for example, the landscape has been slowly changing. A landowner observed that since the project commenced, they now see participating landowners fencing off their parcels of land and also building tin-roofed houses. Many are now also able to send their kids to school within and outside Kajiado. "The project is and will accelerate modernity in Kipeto. But we don't know whether it will be for the good or bad," an adjacent landowner concluded.



KENYAN

Vision 2030 developed in 2007 made a commitment to renewable energy targeting 23,000MW by 2030

6 KIPETO WIND FARM A CASE STUDY ANALYSIS

Kenya finances its energy infrastructure development needs through a mix of sources that includes traditional public and private finance such as tax revenues and loans both concessional and non-concessional[18]

Public Finance

Public Finance provision through public procurement remains key in the delivery of projects that not exacerbate fiscal constraints and negative development outcomes on communities in project areas. Since 2008, the government has been committed to promoting renewable energy projects through policy instruments such as the Feed-in Tariff policy. Updated in 2010 and 2012, the FiT policy guarantees a fixed price (in US$) for power feeding into the national gird. The government also provides income generating security to project developers which they can use to obtain project finance. The aim of FiT is to oblige purchasing of generated power, lower the barriers for renewable energy interventions, and facilitate the growth of a sustainable market. It is imperative that Kenya develops more of these home grown financing solutions for national development projects.

Official Development Assistance (International Public Finance)

The Kenya Joint Assistance Strategy (KJAS) coordinates the receipt of support from international organizations for investment in renewable energy development. Under KJAS, Kenya receives assistance from 15 development partners, notably: World Bank, African Development Bank (AfDB) and Agence Française De Développement (AFD), European Investment Bank (EIB), United National Development Programme (UNDP), United Nations Environmental Programme (UNEP), German Development Bank (KfW), Japanese International Cooperation Agency (JICA), and United Stated Agency for International Development (USAID), among others. Through KJAS, Kenya can harness its ODA and domestic resources to initiate energy projects and limit the growth of its debt owed to private players (project developers and commercial banks). It is important that the Government of Kenya engage Green Investment Banks (GBIs) with caution (cost-benefit analyses are key) as they now also work with ODA providers. GIB's also offer alternative financing mechanisms for green energy projects. They use innovative transactions, risk reductions and market expertise to achieve a range of goals

18 Financing Renewable Energy, https://renewableenergy.go.ke/resources/financing-renewable-energy/

including access to concessional capital at relatively lower interest rates and longer tenures for green investments.[19]

KENYA finances its energy infrastructure development needs through a mix of sources that includes traditional public and private finance such as tax revenues and loans both concessional and non-concessional

19 David, D. and A. Venkatachalam. 2018. A Comparative Study on the Role of Private–Public Partnerships and Green Investment Banks in Boosting Low-Carbon Investments. ADBI Working Paper 870. Tokyo: Asian Development Bank Institute. Available: https://www.adb.org/publications/comparative-study-role-ppp-green-investment-banksboosting-low-carbon

7 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The government passed the Private-Public Partnerships Act in 2013, to establish the institutional framework and standardize the PPP process. The institutional framework established a PPP Committee whose role is to manage the PPP agreements, as well as a PPP unit under the National Treasury to act as a secretariat to the Committee. The PPP Process established that PPPs are initiated by a public entity and the private partners are sourced competitively. Investment proposals can be single-sourced albeit, in limited circumstances where only one entity can undertake the project, the intellectual property cost is substantial, the project is urgent or in case of a specific circumstance prescribed by the Cabinet Secretary for National Treasury.

Like most low-income and lower middle income countries, Kenya has weak legislative and institutional structures to guide the operations of PPPs and maximize profitability of energy infrastructure investments. Robust legal, policy and institutional frameworks should be developed in tandem with the ongoing promotion of PPPs as the panacea for inadequacies in capital investment in low-income countries. These include areas like procurement regulations, power purchase agreements, project implementation agreements, and tariff policies.

With regard to the Kipeto Energy Limited (KEL), a PPP financed by the Overseas Private Investment Corporation (OPIC) to a tune of $ 233 million, the analysis showed that there are both positive and negative gaps. The uptake of the model by various countries is very impressive and a step to the right direction especially for developing countries. Kipeto wind Power Project has to a large extent held its end of the bargain through the CSR initiatives that it has undertaken. It is evident that there now exists a better healthcare system for the community in Kipeto, vibrant schools have been developed and there is access to energy in form of solar equipment. This has in many ways improved the socioeconomic status of the people around Kipeto.

8 RECOMMENDATIONS

Government of Kenya

Public participation is key in every project. The PPP policy and Act should incorporate views of the public especially project affected communities are taken into consideration.

Access to Information - The Ministry of energy needs to take an active role in PPPs. In the Kenyan case, no documentation shows participation of the government agencies in the Kipeto wind Project.

Put Development Outcomes First - The Ministries of Finance and Energy should be involved in order to minimise risk on communities. As it stands, the local community and the private entity bear the most risk in the event Kipeto Wind Project ceases to take off.

Cost Benefit Analysis - The government should adopt a cautious approach to encouraging investments in the renewable energy sector. Incentive for private sector participation should be guided by the best interest of the country through following legislative mandates. Otherwise domestic public procurement and finance remains the key way to financing national programs

World bank and other International Financial Institutions

- Development Financial Institutions (DFIs) should not promote PPPs without addressing the negative implications they pose. They should provide risk guarantees that strengthen the sovereign guarantees in countries which have below-investment grade credit ratings. The key requirement for participation by these institutions is a well-designed program for procuring renewable energy.

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