

NATIONAL CLIMATE CHANGE ACTION PLAN



REPUBLIC OF KENYA


FINANCE

Section E: Investment Climate for Climate Investment

August 2012

:vivideconomics

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* The Climate and Development Knowledge Network (“CDKN”) is a project funded by the UK Department for International Development (DFID) and the Netherlands Directorate-General for International Cooperation (DGIS) and is led and administered by PricewaterhouseCoopers LLP. Management of the delivery of CDKN is undertaken by PricewaterhouseCoopers LLP, and an alliance of organisations including Fundación Futuro Latinoamericano, INTRAC, LEAD International, the Overseas Development Institute, and SouthSouthNorth.

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Abbreviations

ACAD	African Carbon Asset Development Facility
ACP	African, Caribbean and Pacific
AECF	Africa Enterprise Challenge Fund
AFD	Agence Francaise de Développement
CAF	Climate-Smart Agriculture Financing Facility
CEEC	Centre for Energy Efficiency and Conservation
EE&C	Energy efficiency and conservation
EIB	European Investment Bank
FI	Financial institution
GDC	Geothermal Development Corporation
IFC	International Finance Corporation
IPP	Independent power producer
KAM	Kenyan Association of Manufacturers
KPLC	Kenya Power and Lighting Company
PPA	Power purchase agreement
RBF	Results-based financing
ReFiT	Renewable energy feed-in tariff
SCAF	Seed Capital Assistance Facility
SME	Small and medium-sized enterprise
SREP	Scaling up Renewable Energy Programme
UNEP	United Nations Environment Programme
WEF	World Economic Forum

Summary of key findings

It is well understood that the private sector needs to participate in the development of solutions to climate change and low-carbon investment. The scale of the investment challenge is too great for the public sector to undertake alone while, through technological and business innovations, firms can deliver climate solutions in an efficient and sustainable way. Factors that affect their participation include appropriate policy and regulation, internal technical and financial capacity, and access to finance, which in itself is a function of the capacity and willingness of local banks and other capital providers to invest.

Strengths	
<p>There are many positive aspects to Kenya's low-carbon investment climate, especially with regards to renewable energy. Many consider that the country offers one of the most favourable environments in Sub-Saharan Africa. Specific factors include:</p> <ul style="list-style-type: none"> ✓ High GDP and energy demand growth; ✓ Good renewable resources and energy efficiency potential; ✓ Kenya is a place to do business, with a fairly effective regulatory regime; ✓ Fairly favourable renewable energy, energy efficiency and conservation investment framework, including regulation and fiscal incentives (albeit with some challenges with implementation); ✓ Fairly innovative government engagement and equitable treatment of investors; and ✓ Relatively well-developed financial sector compared to other countries in the region. 	
Gaps	Recommendations
<p>Policy and regulation – renewable energy: Whilst noting its positive aspects, the regulatory process for renewable energy project development is overly long and complex, involving several government bodies, permits and licenses. Concerned institutions are Kenya Power (formerly the Kenya Power and Lighting Company or KPLC), the Ministry of Energy, the Energy Regulatory Commission (ERC), as well as the Ministry of Local Government and city and/or county councils. There are also concerns over the fact that Kenya Power is the only bulk power purchaser, increasing project developer and financier risk.</p> <p>In addition, the policy initiatives and incentives that exist do not work as effectively as they might. For example, Kenya's renewable energy feed-in tariff (FiT) could be improved; planned tax and duty initiatives and exemptions on renewable energy technologies could be implemented more, and more effectively, by the Ministry of Energy and Ministry of Finance; and renewable energy incentive programmes and funds like the Geothermal Development Corporation could be implemented and expanded. At a broader level, there are opportunities for enhancing government engagement and dialogue with both the foreign and domestic private sector on policy development and objectives, and in the rolling out of risk reduction solutions.</p>	<ul style="list-style-type: none"> ✓ Enhanced government engagement with (international) investors and supporting institutions via a regular (every three months) public-private dialogue platform hosted by the Ministry of Energy in collaboration with other government bodies and Kenya's private sector, and building on the Prime Minister's call for engagement at the World Economic Forum (WEF) in 2011 ✓ Engagement in proposals for a UK-Kenya Climate Change Financing Facility ✓ Support for the the implementation of a clear FiT tailored to power generation needs, rather than the current 'negotiation and ceiling' model, as planned under the draft Energy Policy and Bill 2012 ✓ Greater regulatory harmonisation and reduced bureaucracy by supporting a planned one-stop-shop within the ERC to gather all necessary information, permits and licenses for (renewable energy) project development ✓ Support for the creation of a standardised, bankable power purchase agreement (PPA), as planned under the draft Energy Policy and Bill 2012 and working with the WEF ✓ Dissemination of information to all relevant stakeholders regarding decision-making within relevant government institutions, through publication of reasons for all key decisions ✓ Support for the implementation of tax breaks

	and other fiscal incentives (which exist in law but not in practice) for all renewable energy technologies and products
<p>Policy and regulation – energy efficiency: Despite an energy inefficient economy and recognition that energy efficiency can play a key role in the energy sector, the implementation of a formal energy efficiency policy and regulatory framework to attract investment has been intermittent and inadequate. In 2004 the Ministry of Energy, with stakeholders, drafted Sessional Paper no. 4 to promote energy efficiency technologies and measures. The Energy Act 2006 repeated the effort, and the draft Energy Policy and Bill 2012 will further expand the energy efficiency legislative corpus. But other than the establishment of the Centre for Energy Efficiency and Conservation (CEEC, a component of Sessional Paper no.4 2004) by the Ministry of Energy at the Kenyan Association of Manufacturers (KAM) and the enforcement of efficiency standards for some solar technologies, few of the proposed policy interventions have been implemented. Concerned government institutions are the Ministry of Energy, the Ministry of Finance, Kenya Power and the ERC, amongst others. There are also no dedicated energy efficiency agencies at the national level that could be used to promote compliance with measures and take-up of technologies. Finally, whilst noting existing initiatives, knowledge of and expertise in the energy efficiency space amongst government staff, large scale end-users and residential consumers could be improved.</p>	<ul style="list-style-type: none"> ✓ Implementation of national energy efficiency policies, regulations and standards as legislated in Sessional Paper no.4 2004, the Energy Act 2006 and the draft Energy Policy and Bill 2012 ✓ Enforcement of energy efficiency policies, regulations and standards by various means, including market-based measures and fiscal incentives and penalties, as legislated in Sessional Paper no.4 2004, the Energy Act 2006 and the draft Energy Policy and Bill 2012 ✓ Labelling of end-user technologies such as lighting and refrigerators with minimum energy performance standards, working with the Standards and Labelling Programme at the Ministry of Industrialisation ✓ Awareness raising campaign amongst large-scale energy producers and industrial end-users, building on existing initiatives at the CEEC and Kenya Power ✓ Support for the institution of the Energy Efficiency and Conservation Agency as envisaged under the draft Energy Policy and Bill 2012 for promoting and enforcing energy efficiency standards and targets and expanding awareness ✓ Further training and capacity building of government staff in energy efficiency policies, practices and procedures
<p>Access to finance: Access to finance for the private sector operating in the low-carbon space is limited. The type of finance provided by Kenyan financial institutions (FIs) is expensive and not particularly suited to low-carbon investment and there is little project finance. Banks are risk averse; have a limited understanding of private sector opportunities; rarely offer long-term, affordable credit; require high levels of collateral; and are reluctant to lend to small or medium-sized companies based upon past experience. This is in part due to the fact that the banking system's provision of credit is based upon short-term deposits and, until very recently, the attractiveness of high yield and short tenor government bonds. In addition, affordable, long-term equity from private equity firms is scarce. International financial institutions offer more opportunities but are still expensive.</p>	<ul style="list-style-type: none"> ✓ Establish the Kenya National Climate Fund for the sake of the recommendations in this and other sections ✓ Development of a public fund, possibly under the proposed Kenya National Climate Fund, with high risk appetite in order to provide patient, long-term early stage finance to project developers, building on the model of the Geothermal Development Corporation and working alongside WEF ✓ Provision and facilitation of technical assistance to Kenyan financial institutions to improve understanding of the risks, needs and opportunities in different renewable energy and energy efficiency sectors, and the provision of project finance. This could be provided by the proposed Kenyan Climate Fund ✓ Improved accessibility and coordination of technical assistance programmes to Kenyan FIs, for example via a one-stop-shop, the Kenya National Climate Fund, the Kenyan Private Sector Alliance or the Kenyan Bankers Association ✓ Use of the proposed Kenyan National Climate Fund to provide concessional credit lines to banks to lend on to firms on favourable terms, building on existing programmes

	<ul style="list-style-type: none"> ✓ Use of the proposed Kenyan National Climate Fund to provide loan guarantees to encourage local financial institutions to participate in lending
<p>Technical and financial capacity: Kenyan firms, especially smaller ones, often suffer from a lack of technical and financial capacity. This in practice means that they lack the ability to identify a resource (for example in a renewable energy sector or in energy efficiency) and appropriate technology; develop a feasibility study or business plan; navigate regulatory requirements; effectively prepare for and carry out negotiations with government and financial institutions; and reliably manage and account for finances. They also lack the financial skills to develop more complex financing models, e.g. project finance, exacerbating the ‘access to finance’ issues above. The absence of such skills acts as a disincentive to investors, in particular as regards small and medium-sized firms (SMEs). If an investment does take place, SMEs may require substantial and tailored coaching and support.</p>	<ul style="list-style-type: none"> ✓ Improved accessibility and coordination of technical assistance programmes for firms, for example via a one-stop-shop, the Kenya National Climate Fund, the Kenyan Private Sector Alliance or the Kenyan Association of Manufacturers ✓ Provision and facilitation of access to technical, business and financial services assistance and consultancy by development agencies, government bodies and business associations or banks to assist in the development of feasibility studies and business plans and to improve governance, financial management, marketing, and public relations, amongst other areas ✓ Provision and facilitation of access to expertise in energy efficiency and renewable energy technologies and practices

1. Introduction

Kenya is in a position to capitalise on private business and investment to address many of the challenges associated with climate change. In order for this to happen a vibrant private sector and a conducive investment climate are mandatory. Relevant sectors in which the domestic and international private sectors currently play a role in Kenya include renewable energy and energy efficiency, industry, agriculture, forestry and water. However, many of the activities and firms in these sectors are constrained by factors such as limited capacity, limited access to finance and regulation and policy that are at best passive and in some cases a hindrance.

The purpose of this section is to assess the broader enabling framework and environment for private sector low-carbon investment in Kenya so as to provide recommendations for improvement. The attractiveness of the low-carbon investment climate will have a major bearing on the implementation of the Kenya Climate Change Action Plan, with regard to efforts of the Kenya National Climate Fund and the carbon trading platform, and the roll-out of the activities of other subcomponents – notably 2 (Enabling Policy and Regulatory Framework), 4 (Nationally Appropriate Mitigation Actions) and 7 (Knowledge Management and Capacity Development). A positive business environment will enhance the Action Plan’s activities and success, while a more negative one will detract from them.

This section first notes the main strengths of the low-carbon investment climate. It then addresses the policy and regulatory environment for renewable energy and energy efficiency and the existence of government incentives and barriers in that environment. Thirdly, it analyses the issue of how to access finance and the barriers therein. Fourthly, it looks at perceived and actual institutional strengths and weaknesses of businesses and financial institutions (FIs). Finally, it makes a series of recommendations for improvement, including potential implementing agencies. In terms of sectors, it predominantly looks at renewable energy and energy efficiency due to their dominant position in the low-carbon investment space, but many of its lessons are relevant to other climate change sectors as well.

2. Investment climate strengths

There are many positive aspects to the low-carbon investment climate in Kenya, and much of the business environment is viewed as favourable by investors. This is particularly the case when it comes to the country’s approach to renewable energy: Kenya offers one of the most favourable environments in Africa for renewable energy investment.

The factors which support low-carbon investment in Kenya include, in no particular order:

- **High GDP and energy, especially power, demand growth:** Economic growth of 4.4 per cent in 2011 and an anticipated peak load growth of 771 per cent by 2030 (from 1,227 MW in 2010 to 9,458 MW in 2030ⁱ) provides plenty of opportunities for low-carbon energy investment;
- **Present imbalance of power demand over supply:** Surplus power generation capacity has been exhausted, which, with ever increasing demand, requires immediate action targeted towards renewable options – this challenge has already led to the development of government support programmesⁱⁱ;

- **High greenhouse gas emission reduction potential:** the three factors below combined represent strong emissions reduction opportunities:
 - **Good renewable resources:** Abundant geothermal resources, high wind speeds (in some locations) and high insolation rates provide ample opportunities for renewable energy investment;
 - **High current use of non-sustainable biomass:** About 70 per cent of primary energy used in Kenya is biomass-based (firewood and charcoal), half of which is from non-sustainable sources;ⁱⁱⁱ
 - **Good energy efficiency potential:** Kenya’s energy efficiency potential remains untapped. The use of inefficient equipment in industry, transportation and household sectors is common, and it is estimated that between 10 per cent and 30 per cent of primary energy input is wasted, all of which offers an opportunity for energy efficiency investment;^{iv}
- **Perception of Kenya as a ‘place-to-do-business’ and strong work ethic in labour force;**
- **(Relative) political stability:** In comparison to a number of other African countries;
- **Effective power sector model:** Vertical unbundling between generation and transmission/distribution has created an environment in which some independent power producers (IPPs) have flourished;
- **Innovative government engagement:** The development of Geothermal Development Corporation (GDC) to absorb early-stage geothermal drilling risks is regarded as a positive development;
- **Financial sector development:** Kenya has a well-developed financial sector, and, at least in terms of corporate finance for medium-sized and large firms, it is easier to secure investment in Kenya than in most other countries in Africa, notwithstanding extant barriers;
- **Reliability of contracts and payment:** Kenya Power (formerly the Kenya Power and Lighting Company or KPLC) has a fourteen year history of dealing with IPPs and during that time it has never defaulted on its obligations;
- **Foreign currency agreements:** IPP agreements and power purchase agreements (PPAs) can be signed in foreign currency, which is a good incentive for foreign investors as it reduces currency risk, facilitating access to finance; and
- **The revised renewable energy feed-in tariff (ReFiT) system is, with some significant caveats, workable.**

3. The renewable energy landscape

The tables and charts below provide an overview of the renewable energy landscape in Kenya. To date, this has formed the bulk of low-carbon investment in the country and so provides a useful overview of overall activity in the country. It is also the sector where the most complete data is available. In total, the available data suggests that:

- There has been around US\$ 2.8 billion of cumulative investment in renewable energy in Kenya, with a 46 per cent/54 per cent debt to equity split;
- In terms of numbers, according to the table below, 50 per cent of renewable energy projects are in biomass, 36 per cent in wind and the rest in solar, hydro and geothermal, but the majority of investment, by value, goes into geothermal and wind;
- Kenya hosts a wide array of investors from different countries, especially the UK and South Africa; and
- International investors are particularly important in geothermal and wind projects, while Kenyan investors are relatively more important in the hydro and biomass space.

Separately, the Electricity Sub-Sector Medium-Term Plan presents an overview of renewable energy projects under development by the private sector and parastatals, in some cases with development agency assistance, in advance of 2016. It reveals a total of a further 20 renewable energy projects in the pipeline with a generation capacity of 1,500 MW.^v

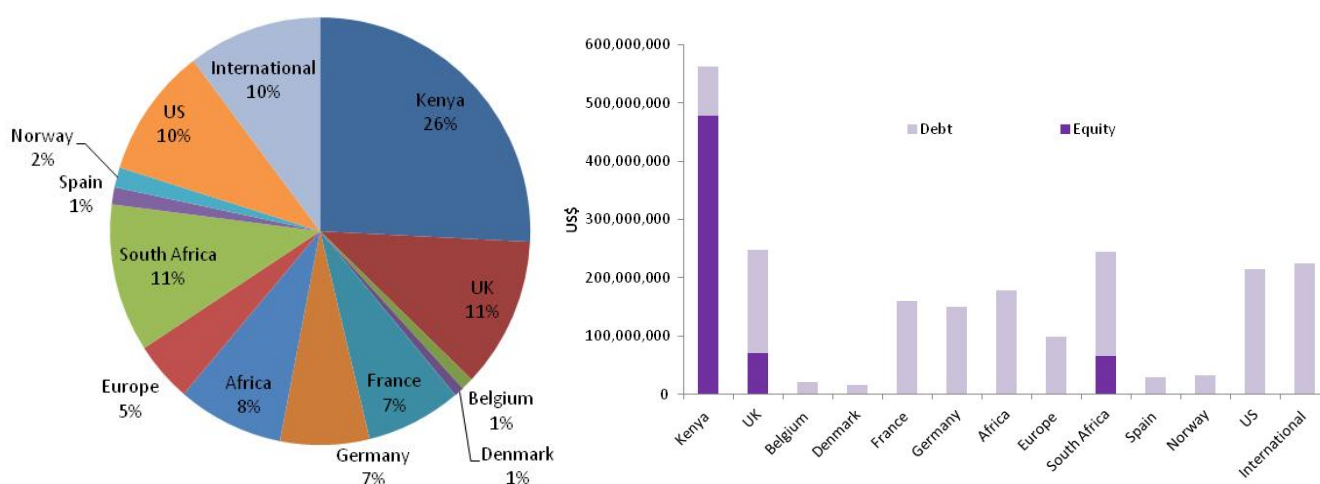
Table E1: Size and nature of cumulative renewable energy investment in Kenya^{vi}

Total Disclosed Investment in Renewable Energy in Kenya					
Equity (54%)	Debt (46%)		Total		
US\$ 1,532,099,125	US\$ 1,302,965,000		US\$ 2,835,064,125		
Name of Investment Vehicle	Sector	Investment (US\$)	Equity	Debt	Country
Tower Power Kenya Ltd	Private	2,138,000	x		Kenya
Oserian	Private	9,000,000	x		Kenya
Kenya Tea Development Authority	Parastatal	32,745,125	x		Kenya
KP&P	Private	49,178,571	x		Kenya
Kenya Electricity Generating Company	Parastatal	1,067,840,000	x		Kenya
Equity Bank	Private	14,967,000		x	Kenya
PIBO	Private	68,600,000		x	Kenya
Powergas International	Private	2,138,000	x		UK
Aldwych International	Private	65,571,429	x		UK
Standard Bank of London	Private	178,500,000		x	UK
Belgium Government through Kenya Commercial Bank	Government	20,500,000		x	Belgium
Industrial Fund for Development	Development agency	16,392,857	x		Denmark
Agence Francaise de Developpement (AFD)	Development agency	160,050,000		x	France
KfW Bankengruppe	Development agency	150,053,000		x	Germany
International Development Agency (IDA World Bank)	Development agency	225,405,000		x	International
African Development Bank	Development agency	178,500,000		x	Regional
European Investment Bank	Development agency	99,490,000		x	Regional

International Corporation	Development	Development agency	65,571,429	x		South Africa
Nedbank		Private	178,500,000		x	South Africa
Norfund		Development agency	32,785,714	x		Norway
Ormat International		Private	215,000,000	x		US

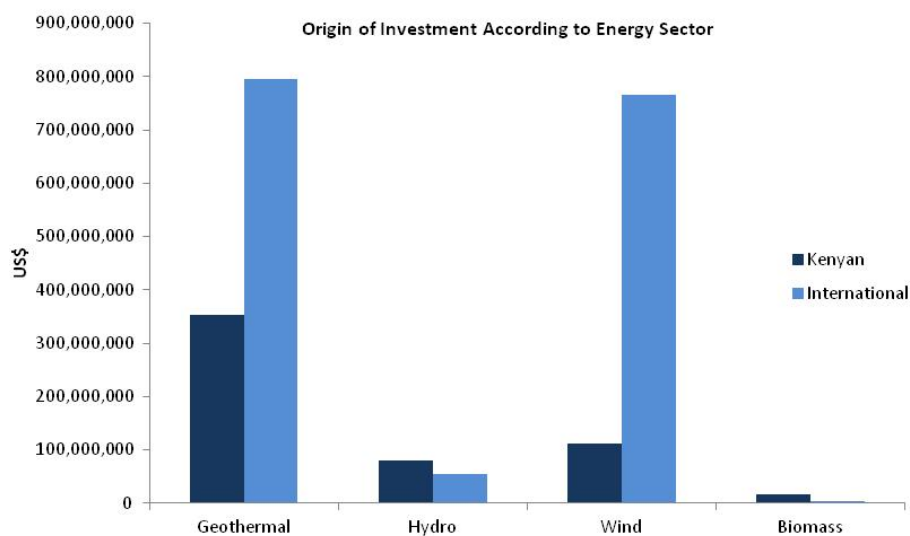
Source: ASI

Figures E1 and E2: Country of origin of investment in renewable energy in Kenya, broken down by debt and equity



Source: ASI

Figure E3: Origin of investment by sector



Source: ASI

4. Current development partner initiatives

A plethora of development partner activities aim, in variety of ways, to overcome the risks and problems associated with low-carbon investment in Kenya. Development agencies have established, or are in the process of establishing, instruments to either serve as actual sources of investment or to help unlock the barriers to investment, with a focus on capacity building.

Table E2: Examples of institutions and facilities to unlock climate investment in Kenya

Organization	Details
International Finance Corporation (IFC)	The IFC's clean energy investment portfolio comprises several tools and emphasises structured project finance. It includes the Capital Markets Initiative, which seeks to incentivise private equity investors to invest more in sustainable energy corporate finance, and the Climate Change Investment Programme for Africa, which provides advisory services and investments to financial institutions in Kenya, helping them build a market for sustainable energy projects, as well as focusing on capacity building and on raising awareness of sustainable energy investments.
IFC/European Investment Bank (EIB)	The EIB is collaborating with the IFC on the \$60 million African, Caribbean and Pacific (ACP) Sustainable Energy Facility, a climate change-focused investment facility that provides co-finance for investment to renewable energy developers as well as technical assistance to assist them in project development.
Agence Française de Développement	The AFD is providing €30 million in long-term concessionary debt for low-carbon (mitigation) investments through two local banks (CFC Stanbic and the Cooperative Bank of Kenya). To facilitate this, the AFD is also providing technical assistance to project developers and banks through a dedicated team housed at the Kenya Associations of Manufacturers (KAM).
Scaling up Renewable Energy Programme (SREP)	The Scaling up Renewable Energy Programme falls under the Strategic Climate Fund of the World Bank's Climate Investment Funds. SREP promotes both public and private sector actions to remove barriers that might otherwise inhibit scaled-up private sector investments. It will use a combination of grants, loans, guarantees and technical support.
World Bank – Climate Innovation Centre	The World Bank, through infoDev (a World Bank trust fund) is establishing the Climate Innovation Centre, which is intended to provide technical, financial and business advice to SMEs in the climate technology space in Kenya. It will also provide proof-of-concept grants and facilitate access to external investment.
Energy and Environment Partnership	The Energy and Environment Partnership, a European multi-donor programme, has been established to achieve more efficient renewable energy solutions and will contribute up to €200,000 to proposed projects. The total budget for the EEP programme for the first phase from 2010 to 2012 is €9.5 million.
Africa Enterprise Challenge Fund (AECF) REACT window	The AECF, a multi-donor fund spearheaded by the UK Department for International Development, REACT window co-invests in climate mitigation- and adaptation-focused businesses and projects, alongside the business itself. Together with the grant component, it also supports the business or project through the project development cycle.
UN Environment Programme (UNEP) Seed Capital Assistance Facility (SCAF)	The UNEP SCAF offers renewable energy and energy efficiency project developers a combination of business development assistance and start-up seed financing in Kenya and other selected African countries. It is designed to offset the hurdle of higher perceived risks and low expected returns resulting from early stage clean energy projects and enterprise development.
African Carbon Asset Development Facility (ACAD)	ACAD is designed to help African banks and entrepreneurs overcome market entry barriers to the carbon market, sharing the costs and early-stage risks of developing carbon projects. The facility offers carbon, energy and banking services provided by UNEP and Standard Bank.

Scaling up of the Energy and Environment partnership with Southern and East Africa	The programme has £27.6 million of International Climate Fund support to promote low carbon private sector development in Southern and East Africa through the provision of co-financing to viable projects focusing on improving energy access for poor people, improving energy supply, and improving energy efficiency by demonstrating new technologies.
Climate-Smart Agriculture Financing Facility (CAF)	This joint initiative by the World Bank, IFC, USAID, the UK Department for International Development and the Banking for Environment Initiative (a group of banks working together on issues on environment finance) is focused on initiatives that demonstrate a model for engaging the private sector to scale-up inclusive and 'climate-smart' agricultural investments.

5. Broader investment climate

In terms of the broader investment climate, that is, that which applies economy-wide and not simply to low-carbon sectors, there are a number of risks. These include inherent country-related risks, such as the political environment, openness in government and in business dealings, and currency risk, which are relevant to and can hamper those wishing to undertake investment in Kenya. There are various indicators that illustrate the bureaucratic and political issues that must be taken into consideration by those wishing to conduct business within Kenya. For instance, the Knaepen Package risk indicator, which classifies countries into eight categories (0-7) according to the likelihood that the sovereign government would honour its contractual obligations, scores Kenya as 6 (7 is worst); although this needs to be seen in the context that, as discussed above, to date, specifically in relation to IPPs in the power sector, there has not been a default. Similarly, the World Bank places Kenya in the bottom 20 per cent of countries as regards rule of law and control of corruption.^{vii}

Equally, Kenya scores unfavourably when it comes to the ease of doing business, for example in accessing necessary permits and licenses to start a business, acquiring land, paying taxes and duties, and pursuing judicial proceedings, amongst others. The World Bank Doing Business Survey reports that it takes 33 days to start a business at a cost of 37.8 per cent of average national per capita income in Kenya. By contrast, the comparable figures in Rwanda are three and 4.7 per cent.

Local investors are, as a result, less able to engage in business dealings than they might be in other countries, and international investors perceive that they typically require local partners before contemplating investment in Kenya. This challenge holds back all forms of investment in Kenya, not just in climate change sectors.

Table E3: Kenyan governance indicators

World Bank Worldwide Governance Indicators 2010 ^{viii}		
Governance Indicator	Percentile Rank (0 – 100)	Governance Score (-2.5 to + 2.5) +2.5 being best
Voice and Accountability	39.8	-0.23
Political Stability	13.7	-1.2
Government Effectiveness	35.9	-0.54

Regulatory Quality	48.8	-0.13
Rule of Law	16.6	-1.01
Control of Corruption	18.7	-0.91

Table E4: Kenyan Doing Business Indicators

World Bank and International Finance Corporation Business Indicators ^{ix}	
Indicator	Rank (out of 183)
Ease of Doing Business	109
Starting a Business	132
Protecting Investors	97

Table E5: Kenyan transparency and corruption indicators and Knaepen Package

Transparency International Corruption Perception Index ^x	
Rank (out of 182)	Score (out of 10) 10 being best
154	2.2
Knaepen Package Risk Category (0 – 7) 7 being worst ^{xi}	
1 st July 2011 – 4 th Nov 2011	28 th Oct 2011 – 31 st Dec 2011
6	6

6. Policy and regulatory barriers – renewable energy

There are specific areas where improvement to the renewable energy regulatory environment can and should be made, which could significantly increase renewable energy investment in the country. The government has in recent years not provided adequate support in incentives and other crucial assistance that could further promote climate investment. This is borne out by international and Kenyan investors' experiences. However, the government has taken steps towards making necessary improvements (notably in the draft Energy Policy and Bill 2012 expected to pass before the end of the year) which if implemented effectively, could lead to a more favourable investment environment for renewable energy.

Regulation and bureaucracy

While there is a framework for investment in, and development of, clean energy, the approval and regulatory requirements are slow and it can sometimes take in the region of three (or more) years for project approval to be given. This compares unfavourably with, for instance, Rwanda, where it takes an average of eight months to secure a PPA. The broader regulatory process

likewise requires several permits and/or licenses from several agencies, such as the Ministry of Energy, Kenya Power, the ERC, the Ministry of Local Government and city and/or country councils.

The Ministry of Energy has made plans to simplify the regulatory process by creating a one-stop shop under the ERC, where developers can address all regulatory requirements in one go; and by reducing the number of permits and licences needed to one permit for facilities under 10 MW in size and one license for facilities over 10 MW in size. These plans are yet to be enacted.

The ReFit policy

Through Kenya's energy policy Sessional paper No.4 of 2004, the Energy Act 2006, and the subsequent Renewable Energy Feed in Tariff policy of 2008 (revised in 2010), the Kenyan government supports the development of renewable energy projects. The ReFit has been moderately successful in attracting private sector interest in renewable energy project development. However, despite this interest, project implementation has been limited. Even allowing for a lag in take-up and implementation and Kenya Power's lack of focus on smaller projects, it is clear that the ReFit policy is not attracting investment as well as it might.

The main problem is that the ReFit does not provide a certain, fixed price per kilowatt hour (kWh) for developers before project outset. Rather, it creates a ceiling beyond which negotiations to determine a fixed price cannot exceed, and below which the price negotiated may lie. This creates uncertainty as to the price developers will receive and can lead to protracted negotiations. Secondly, the tariff does not apply to facilities with generation capacity of over a certain size (100 MW for wind and biomass, 70 MW for geothermal, 40 MW for biogas and 10 MW for hydro).^{xii}

The draft Energy Policy and Bill 2012 allows for the biennial reform of the ReFit policy. As such, a recent review of the current FiT will lead to the creation of a standard, non-negotiable feed-in tariff (i.e. one with a fixed price), and to the revision of the price per kWh for each renewable technology type.^{xiii} It also alters the restrictions on the size of project eligible for the FiT to make FiT more tailored to project capacities. Should the Bill pass, these measures would constitute a significant improvement to the ReFit.

Concerns over PPAs and the sale of power

Doubt exists amongst producers and investors as to the 'bankability' of power purchase agreements signed with Kenya Power. Uncertainty arises because of the regulatory process alluded to above, and because Kenya Power is the sole bulk power purchaser. International and Kenyan financiers are thus reluctant to invest in capital-intensive projects without more security of regulation and purchase, and often ask that the government act as a guarantor for Kenya Power, even if a PPA is signed. Currently the government is not in a position to provide such guarantees on renewable energy projects, but the World Bank is currently working with the government to provide a guarantee facility oriented towards geothermal production, and with Kenya Power as regards its liabilities vis-à-vis IPPs. It should be noted that for foreign investors the Africa Trade Insurance Agency^{xiv} and the Multilateral Investment Guarantee Agency are also options.

The government is addressing these concerns in two ways. Firstly, the Ministry of Energy, under the biennial review of the FiT allowed for in draft Energy Policy and Bill 2012, the ERC and Kenya Power are working together to create a standardised, non-negotiable PPA, which covers the terms of the IPP and includes a purchase obligation of the off-taker.^{xv} It is intended to give comfort to those financing renewable projects. Secondly, the draft Energy Policy and Bill 2012 will if passed allow for the expansion of the number of off-takers beyond just Kenya Power, allowing off-grid IPPs to sell to independent off-takers.

Fiscal incentives

There are limited tax and duty incentives in place for low-carbon technologies and for implementation of renewable energy and energy efficiency projects. This is largely a question of the implementation of legislation rather than of the legislation itself. Sessional Paper no.4 2004, the Energy Act 2006 and the draft Energy Policy and Bill 2012 all contain fiscal incentives such as subsidies and tax holidays, but, with a small number of exceptions, they have not been put into practice by the relevant authorities. The result is that the tax treatment of low-carbon technologies is in practice not harmonised and compares unfavourable with the exemption of kerosene from VAT, creating distortions in relation to some otherwise competitive low-carbon technologies, especially for off-grid alternatives to traditional fuels. The examples of tax breaks relevant to the renewable energy sector apply to solar photovoltaic technology; firstly, the import, construction and sale of solar photovoltaic cells are tax and duty exempt, and secondly small scale solar projects under the FiT are eligible for a ten-year income tax holiday.

The lack of harmonisation on incentives of this sort may put Kenya at a disadvantage when it comes to the international market for renewable energy investment and lead to technology choices in Kenya based on which technology has secured the most favourable tax break, rather than that which is most desired by consumers. As a result, the Ministry of Energy is currently working with the Ministry of Finance to implement fiscal incentives and create a positive list of renewable energy technologies that will be eligible.

Public-private dialogue

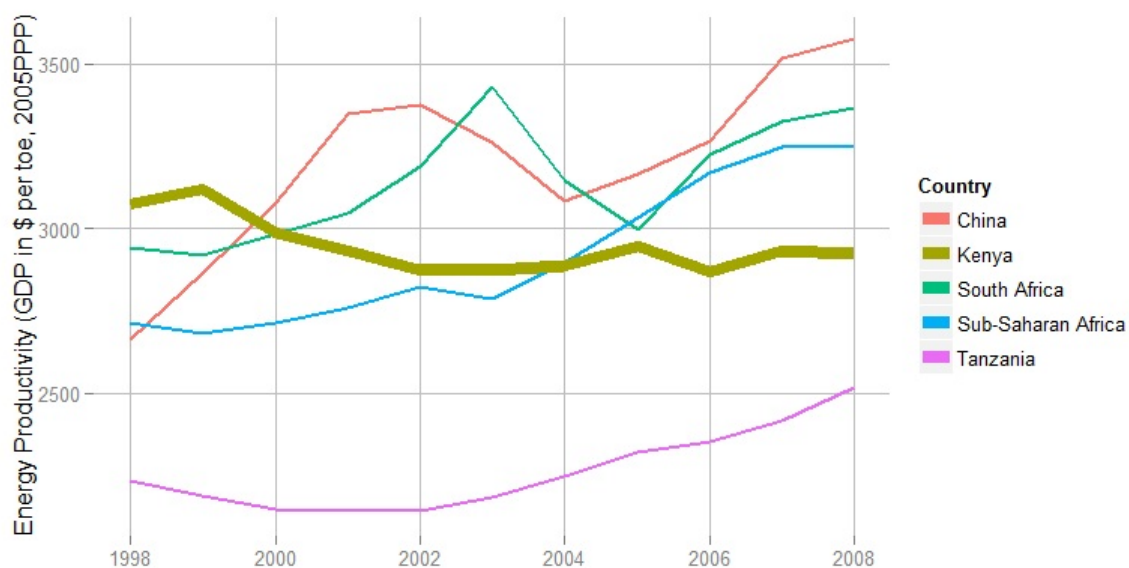
There is at present limited dialogue between the government and private sector, especially the international private sector, particularly in relation to Kenya's overall strategy for low-carbon development. Too few international investors seem to be aware of the National Climate Change Response Strategy of 2010. This was in contrast to the renewable energy initiative in South Africa, which sought to engage with international investors throughout its development. The South African initiative is also considered to be actively and personally supported in the highest echelons of government.

The Prime Minister's Round Tables between the government and (Kenyan) private sector is a good example of existing public-private dialogue. The Ministry of Energy's effort to engage the private sector through National Energy Conferences every two years is another. But more would be required to attract investment on a larger scale. It is noteworthy in this regard that Prime Minister Raila Odinga called for closer collaboration with the (international) private sector on the issue of financing in Kenya at the World Economic Forum at Davos in 2011.

7. Policy and regulatory barriers – energy efficiency

At just under \$3,000 of GDP generated per tonne of oil equivalent, Kenya is less energy efficient than South Africa and the sub-Saharan African average. Its energy productivity has also been falling since the late 1990s, the opposite trend to South Africa, Tanzania and rest of sub-Saharan Africa.^{xvi} It is thus notable that to date the implementation of an overarching energy efficiency policy and regulatory framework has been inadequate. This is despite the existence of energy efficiency policies and regulation on paper, an energy inefficient economy and recognition that energy efficiency can play a key role in the energy sector. As a result of the lack of implementation of planned policies, the energy efficiency framework is insufficient to attract investment on a significant scale. Knowledge and awareness of energy efficiency opportunities, policies and regulations amongst industrial, commercial and residential end-users and consumers is low.

Figure E4: Energy productivity trends in Kenya and other countries



Source: Vivid Economics

From a policy perspective, there are three initiatives of note. The biggest push came in 2004 when the Ministry of Energy, in consultation with stakeholders in the energy sector, developed Sessional Paper No.4. One of the specific objectives of Kenya's energy policy at this time was to promote energy efficiency and conservation as well as prudent environmental, health and safety practices, and to defer additional investment in power generation. The government proposed to promote energy efficiency technologies and measures by:

- Providing technical and financial support to the private sector;
- Enhancing the provision of energy audits and advisory services by the Ministry of Energy to companies and institutions, and establishing equipment testing laboratories for efficiency;
- Promoting cost-effective industrial energy efficiency and conservation (EE&C) measures;
- Encouraging demand side management by industrial and commercial sectors and developing standards and codes of practice on cost-effective energy use;
- Disseminating EE&C information to consumers; and

- Establishing a centre of excellence for EE&C at national level to guide and promote development and implementation of energy efficiency technologies and methods.

The second initiative was the Energy Act 2006 which reinforced these provisions. The third is the draft Energy Policy and Bill 2012 that will, if passed, further strengthen the impetus for action on energy efficiency. Combined, these initiatives would represent a relatively thorough and effective approach to improving energy efficiency.

However, in practice there are few energy efficiency interventions in place. Interventions that have been successfully implemented include:

- The CEEC, established by the Ministry of Energy at KAM. The Centre runs energy efficiency and conservation programmes designed to give recommendations on measures to be implemented as well as increase awareness. It helps industrial and commercial end-users identify energy wastage and determine saving potential. It provides professional training and technical services for developing, designing and implementing energy efficiency activities to suit the needs of government, commercial and industrial consumers.^{xvii} It also conducts the Energy Management Awards for the most efficient Kenyan energy users.
- The ERC has instituted energy management regulation, reporting requirements and standards for a number of technologies, including solar water heaters and solar PV.
- The Standards and Labelling Programme at the Ministry of Industrialisation has developed minimum energy performance standards for a number of household technologies, for example, refrigerators, air-conditioners, industrial motors and lights, which have been submitted to the Kenya Bureau of Standards for approval.
- Kenya Power has established a Demand-Side Management Unit that focuses on the promotion of energy efficient household appliances. It has, on behalf of the government, distributed 1.25 million compact fluorescent lights (CFLs), and is seeking finances to distribute a further 3.3 million.
- The Ministry of Energy has replaced old and inefficient lighting with more modern, efficient equipment in some government buildings.

Government institutions responsible for policy implementation include the Ministry of Energy, the Ministry of Finance, Kenya Power and the ERC, amongst others. But, whilst recognising the achievements to date, these institutions do not have the necessary capacity and training to fully execute and enforce energy efficiency activities. To ensure the implementation of an overarching energy efficiency policy and regulatory framework there is a need for a dedicated agency that can operate at the national and local level. The draft Energy Policy and Bill 2012 would establish an Energy Efficiency and Conservation Agency for this purpose. This agency would develop the requisite expertise in and knowledge of energy efficiency, would be responsible for capacity-building, training and awareness-raising in the public and private sector, would enforce compliance with efficiency measures and would promote the take-up of efficient technologies.

8. Access to finance

A bottleneck exists in access to finance in low-carbon sectors in Kenya. Firstly, debt and equity investment is hard to secure, in particular for small and medium-sized enterprises (SMEs), and secondly the type of debt that Kenyan financial institutions provide is unaligned with the needs of those to whom they provide it. This bottleneck is more apparent for local firms than

international or large Kenyan firms who are able to seek capital beyond Kenya's borders, but this latter group are still subject to high costs of debt, which can constrain investment. As a result, a large proportion of low-carbon finance to date has come from, or been facilitated by, Kenya's development partners, as laid out in the table in Section 8 below.

It is important to realise that difficulties in raising capital for a project identified below are inherently related to some of the other barriers affecting the economics of projects discussed in other sections of this section. In other words, these difficulties are as much a symptom of the challenges holding back low-carbon investment in the country, as a cause of that lack of development.

The Kenyan perspective

In general, FIs in Kenya display the following characteristics in their provision of financing to local firms.

- Debt is pegged to the central bank benchmark lending rate (Central Bank Rate) plus a premium that ranges from 400 to 600 basis points, leading to very high annual nominal interest rates of over 20 per cent and real interest rates of 6-7 per cent;
- Under 10 per cent of loans last longer than three months and under 5 per cent for more than a year –loan tenors are very rarely more than five years in duration;
- Firms are required to put up a large amount of collateral to secure their loan, which many of them do not have;
- There are particular challenges in securing loans of \$1 to \$5 million which are too large for micro-finance institutions to supply but sometimes too small for larger financial institutions, leading to a 'missing middle';
- Likewise, loans of above \$100 million, for heavily capital-intensive projects, are difficult to secure in Kenya;
- Although there are plenty of equity providers in Kenya, affordable and long-term early stage equity investment is hard to access from banks or investment funds, without which it can be difficult to secure debt ^{xviii}; and
- FIs prefer to offer corporate financing rather than project finance, and have limited experience in the latter.^{xix}

This kind of financing is not suitable for what many of firms operating in the low-carbon space need, that is dedicated financing models that offer long-term, low-cost, project finance-based loans and long-term low-cost equity investments. It is also unsuitable for the smaller and medium-sized firms, which are generally capital-constrained and have little collateral to offer. As a result it is often impossible or prohibitively expensive for firms to access the funds they require to launch and expand their operations.

There are a number of possible reasons for this disconnect, which are listed below:

- The banking system aligns the provision of debt to its source of funds, predominantly deposits, and deposits have a short (three month) turnover. As such, as mentioned above, the proportion of loans given of longer tenor than three months is under 10 per cent, and of over one year under 5 per cent.
- Government bonds yield high rates of return and, until five years ago, were of a maximum duration of ten years. Although the maximum term has now increased to thirty years, yields are still high. Both factors act as a disincentive for banks to lend long-term to the private sector by making government bonds a more attractive investment proposition.

- Low-carbon investment is a new type of activity and Kenyan FIs have a limited understanding of firms' financing needs, opportunities, operations and business models in the low-carbon space. They are unfamiliar, for example, with renewable energy investment practices and the long lead-time involved, or with the fact that while energy efficiency projects have large cumulative potential, they are often small individually and therefore need specially-designed incentives and financial products.
- There is still inadequate information available about low-carbon sectors, ranging from technologies to pricing to energy to industrial potential and financing.
- FIs are reticent to lend to smaller, early stage firms with minimal technical or financial capacity (see below), which many firms in the sector are, or to projects that are at an early stage of development.
- Banks already undertake good business in well-trodden sectors and investments, rendering them less willing to expand into new fields.
- Underlying the above, there is a general level of risk averseness based on other barriers discussed above and below.

As a result, Kenyan financial institutions are very strict about investing in low-carbon firms and projects. They require a very high level of consultation and risk assessment prior to any investment, at the end of which they may be unable to offer a suitable product, all of which can prove to be an expensive and often discouraging hurdle for many, especially smaller, firms to overcome.

The local appetite for financing (including equity) is nonetheless increasing slowly. The banking sector is maturing, deposits are increasing in size and duration, and knowledge and understanding of the risks and returns inherent in the renewable energy and other sectors is improving. Several international banks with Kenyan operations (e.g. Barclays, Standard Bank and Bank of Africa) have already established climate finance expertise, and others are in the process of doing so (for example NIC Bank). Some banks have built partnerships with international organizations, e.g. the IFC and the Agence Française de Développement, and with NGOs (for example GVEP-International), in order to facilitate the provision of debt to firms.

Tailored investment funds operating in Kenya are also beginning to offer an alternative. They are increasingly willing to supply debt and equity at more favourable conditions to other FIs, for example with a seven or sometimes ten year term, at an achievable rate of return and in the appropriate size bracket for SMEs. But while they are interested in low-carbon investment and have been evaluating firms and projects for several years, the investment rate has been low. This is again partly due to the issues mentioned above. It is also due to the limited capacity of firms seeking investment, which is addressed below.

The international perspective

As a result of the above, many large Kenyan or international firms prefer to seek debt and equity investment from international FIs, which is often cheaper and easier to arrange than from their Kenyan equivalents.^{xx} They are far more receptive to being approached for funding for renewable energy and are far more receptive to investment opportunities. They are able to offer loans and equity over a seven to ten year period. They are also able to offer larger investments, that is, of \$100 million plus, which are necessary for certain types of front-loaded, capital-intensive activities.

9. Capacity barriers

Investment in the low-carbon space in Kenya is relatively new and is still a niche area. As such, many firms are unfamiliar with the technical and financial requirements associated with launching operations, entering relevant sectors, developing projects, or securing financing, that is, they lack capacity. Such capacity constraints are more relevant to Kenyan SMEs than to international and large Kenyan players who have already acquired the appropriate skills or, if not, can access them independently. Not only does a lack of capacity impede the project development process, but it also serves to hamper the ability of firms to access finance from FIs.

The main areas in which firms are capacity-constrained are listed below. Most of them are not unique to Kenya but apply to firms in other developing countries as well.

- Low ability to identify a resource or business opportunity and the appropriate technology or business model;
- Low levels of available information, knowledge and awareness of where opportunities lie amongst both consumers and producers (in particular in the energy efficiency and conservation space but in other sector as well^{xxi});
- Insufficient expertise in developing a proof-of-concept note, a feasibility study and a business plan;
- Poor understanding of financing requirements and financial modelling (e.g. project finance and financial incentives) and of how to accurately assess risk;
- Low level of ability in engaging FIs and securing investment;
- Poor knowledge of how to navigate regulatory requirements and to effectively prepare for and carry out negotiations with government;
- Lack of competence and reliability in accounting and auditing; and
- Weak governance, management and human resources structures.

The means for firms to overcome these barriers include: building up expertise in-house via training and hiring new staff; hiring an external consultant (where competent and available); or accessing assistance from development agencies. The first two solutions are expensive, with the result that local firms tend not to pursue them. In addition, there are very few competent and expert training institutions, intermediaries and consultancies that are available to firms to support the development of low-carbon projects. For example, only a handful of renewable energy consultancy firms exist, and existing energy service companies are derived from consulting firms and have limited knowledge of energy efficiency methodologies.

Development partner initiatives exist to address the lack of capacity, for example the IFC/EIB ACP Sustainable Energy Facility, the World Bank infoDev Climate Innovation Centre^{xxii} and the IFC SME Solutions Centre, which support entrepreneurs in developing their business. However, there is a plethora of these schemes, often with different requirements and focus, and they are poorly coordinated. Unless firms have been active in the sector for many years, it is sometimes difficult to stay on top of all the developments and access the support available.

10. Recommendations

The following palette of recommendations (laid out below according to sector) has been developed based upon the needs and gaps identified in the preceding sections, as well as upon the ‘space for intervention’ given ongoing initiatives by other actors. Due to the diverse nature of the subject matter, i.e. the broad range of subjects that the low-carbon investment climate encompasses, the recommended actions are presented individually rather than as part of a larger strategy. All are, however, designed to support the functioning of the Kenya National Climate Fund, the carbon trading platform and the other subcomponents of the Kenya Climate Change Action Plan, notably Subcomponents 2 (Enabling Policy and Regulatory Framework), 4 (Nationally Appropriate Mitigation Actions) and 7 (Knowledge Management and Capacity Development). Many of these actions will be implementable under the National Climate Fund and the carbon trading platform, as well as forming part of policy and regulatory reforms and mitigation actions under the work of Subcomponents 2 and 4 respectively.

Policy and regulation – renewable energy: Priority actions			
What	How	Institution(s)	Legal or regulatory changes
Active partnership and enhanced engagement between government and (international) private sector and supporting institutions to support low-carbon investment	Via a regular (every three months) public-private dialogue platform (an Energy Round Table) hosted by the Ministry of Energy in collaboration with the Office of the Prime Minister, other government bodies and Kenya’s private sector, and building on the Prime Minister’s call for engagement at the World Economic Forum in 2011	Ministry of Energy Office of the Prime Minister Kenya Private Sector Alliance	N/a
	Active engagement in the proposals for a UK-Kenya Climate Change Financing Facility and other proposals being developed by, for example, the World Economic Forum	Ministry of Energy Ministry of Environment and Mineral Resources Development Partners	N/a
A better structured renewable energy feed-in tariff	Support for the planned establishment of a standard tariff that doesn’t leave room for uncertainty in negotiations Support for increased accessibility of the feed-in tariff to renewable energy facilities of all sizes in certain sectors	Ministry of Energy (Feed-in Tariff Committee) Energy Regulatory Commission Kenya Power	Regulatory changes
Support for greater harmonisation between government departments and institutions involved in the power purchase agreement approval process and reduced levels of	Promotion of the planned creation of a one-stop-shop within the Energy Regulatory Commission to gather all necessary information, permits and licenses for project development and to enable developers to bring	Ministry of Energy Energy Regulatory Commission	Regulatory changes

bureaucracy	<p>their projects to market more quickly a planned one-stop-shop to gather all necessary information, permits and licenses for (renewable energy) project development</p> <p>Dissemination of information to all relevant stakeholders regarding decision-making within relevant government institutions, through publication of reasons for all key decisions</p>		
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Tier 2 actions			
Establishment of a standardised, bankable power purchase agreement that facilitates access to finance from financial institutions	Support for the planned development of standardised, non-negotiable terms for power purchase agreement, based on international best practice and working with the World Economic Forum	Ministry of Energy Kenya Power Energy Regulatory Commission	Regulatory changes
Harmonisation of tax breaks and other incentives to all renewable energy technologies and products	Promotion of efforts by the Ministry of Energy and Ministry of Finance to implement fiscal incentives, including tax breaks, tax holidays and subsidies, which exist in law but not in practice, for renewable energy technologies, by creating a positive list of renewable technologies	Ministry of Energy Ministry of Finance	Legal and regulatory changes

Policy and regulation – energy efficiency: Priority actions			
What	How	Institution(s)	Legal or regulatory changes
Implementation of national energy efficiency policies, regulations and standards	<p>Implementation of existing policies, regulations and standards as legislated in Sessional Paper no.4 2004, the Energy Act 2006 and the draft Energy Policy and Bill 2012 and their integration into current energy, transport and industrial policy</p> <p>Enforcement of energy efficiency policies, regulations and standards by various means, including fiscal incentives and penalties and market-based measures, as legislated in Sessional Paper no.4 2004, the Energy Act 2006 and the draft Energy Policy and Bill 2012</p>	<p>Ministry of Energy</p> <p>Ministry of Finance</p> <p>Energy Regulatory Commission</p>	Legal and regulatory changes
Enhancement of awareness of energy efficiency technologies, practices and benefits	<p>Labelling of end-user technologies such as electric motors, lighting appliances, refrigerators and air-conditioners with minimum energy performance standards, working with the Standards and Labelling Programme at the Ministry of Industrialisation</p> <p>Awareness raising campaign amongst large-scale energy producers and industrial end-users, through the use of publications, brochures and workshops, building on existing initiatives at the Centre for Energy Efficiency and Conservation and Kenya Power</p>	<p>Ministry of Energy</p> <p>Ministry of Industrialisation</p> <p>Energy Regulatory Commission</p> <p>Rural Electrification Authority</p> <p>Kenya Revenue Authority</p> <p>Kenya Bureau of Standards</p>	Regulatory changes

Tier 2 actions			
Establishment of a dedicated government agency at the national and local level to ensure compliance with energy efficiency practices, increase awareness and promote the use of energy efficiency products	Support for the institution of the Energy Efficiency and Conservation Agency as envisaged under the draft Energy Policy and Bill 2012	Ministry of Energy	Legal and regulatory changes
Enhancement of expertise in and knowledge of energy efficiency in relevant government institutions	Further training and capacity building of government staff in energy efficiency policies, practices and procedures, in collaboration with Centre for Energy Efficiency and Conservation	Ministry of Energy	N/a

Access to finance: Priority actions			
What	How	Institution(s)	Legal or regulatory changes
Establish the Kenya National Climate Fund to enable the implementation and financing of many of the recommendations in this and other sections	Issue of a legal notice to establish the Fund within the Ministry of Finance, acquisition of funding from development partners and the Government of Kenya and the hiring of staff to act as fund manager and professional secretariat – see Section B of this report	Ministry of Finance Ministry of Environment and Mineral Resources Development partners	Legal and regulatory changes
Facilitation of long-term, patient, early stage capital to support early stage project development	Facilitation of funds, with high risk appetite, potentially supported by government money and aligned with existing initiatives, notably the Kenya National Climate Fund and the World Economic Forum	Ministry of Finance Ministry of Energy	N/a
Increased understanding of the risks, needs and opportunities of low-carbon investment on the side of financial institutions	Provision and facilitation of technical assistance to Kenyan financial institutions, aligned with existing initiatives, taking advantage of Kenya National Climate Fund	Ministry of Finance Kenya Private Sector Alliance, Kenya Bankers Association and Kenya Association of Manufacturers	N/a
Improved accessibility and coordination of technical assistance programmes to Kenyan financial institutions	Creation of a one-stop-shop at which information on what technical assistance programmes are available, taking advantage of Kenya National Climate Fund	Ministry of Finance Kenya Private Sector Alliance, Kenya Bankers Association and Kenya Association of Manufacturers	N/a

Tier 2 actions			
Facilitation of credit, in particular in the form of project finance, to support low-carbon project development	Provision of long-term credit lines to banks to lend to firms on commercial but attractive terms via the Kenya National Climate Fund	Ministry of Finance Development partners	N/a
	Provision of development partner and/or government loan guarantees to encourage financial institutions to participate in lending		

Technical and financial capacity: Priority actions			
What	How	Institution(s)	Legal regulatory or changes
Improved accessibility and coordination of technical assistance programmes for firms	Creation of a one-stop-shop at which information on what technical assistance programmes are available, taking advantage of Kenya National Climate Fund	Ministry of Finance Kenya Private Sector Alliance, Kenya Bankers Association and Kenya Association of Manufacturers Development partners	N/a

Tier 2 actions			
Improvement of capacity to develop feasibility studies and business plans and in areas of governance, financial management, marketing, and public relations, amongst others, and in all low-carbon sectors	<p>Establishment of a business development services centre within a reputed Kenyan business-focused institution to provide technical, business and financial services assistance and consultancy, building on existing successful models in Kenya and taking advantage of Kenya National Climate Fund</p> <p>Establishment of a centre within a reputed Kenyan institution to offer expertise in energy efficiency and renewable energy technologies and methods, building on existing successful models in Kenya and taking advantage of Kenya National Climate Fund</p>	Ministry of Finance Kenya Private Sector Alliance, Kenya Bankers Association and Kenya Association of Manufacturers Development partners	N/a

Annex – World Economic Forum

As part of its ongoing work helping to unlock private financing for green growth in developing countries, the World Economic Forum has convened a network of international and domestic private and public finance stakeholders, in collaboration with the Government of Kenya. The objective is to identify key bottlenecks to the deployment of private finance at scale (in large-scale renewable energy grid-connected and decentralized solutions), share best practices in financing clean energy from Kenya and abroad, and to identify or build instruments and means through which public finance can bridge the risk and return gap.

The work is taking place alongside, and in harmony with, the Government of Kenya's efforts to improve the low carbon investment climate under the Climate Change Action Plan. As can be seen, there is very significant overlap between the recommendations from our study and the initiatives being developed by the World Economic Forum and, as such, these WEF initiatives provide an important opportunity for the Government of Kenya to take forward our recommendations. As of June 2012, work is being carried out to identify and build a series of specific vehicles and instruments, below, that can unlock private financing for clean energy.

- i. Using some of the best available bankable PPAs that are getting closure in the next few months, develop a standard PPA. Given that a standardized PPA could lead to a large increase in applications from project developers, the application process could include a fee structure (linked to the size of the project) to limit applications of under- or unqualified project developers. Payment of the fee would give the project developer the right to develop a project over a previously agreed amount of time.
- ii. Working with private insurers and IPPs on concrete proposals from the geothermal sector for example, an effort will be made to un-bundle the various kinds of risks and to determine the normal energy market portion of the risk that could be covered commercially, thereby relieving some of the public bill.
- iii. A risk-sharing facility would be created to address the significant risk profile of decentralized energy projects. Through pooling, the same facility could be used for several transactions and especially for early-stage risk sharing. The pool would rely on agreed credit assessment and eligibility criteria, with a wholesale approach from the IFC for example and with domestic banks originating the business.
- iv. To increase lending capacity for domestic banks, a refinancing facility would be designed on the model of the European Bank for Reconstruction and Development in Eastern Europe or the €30 million credit facility by AFD for concessional financing through the Kenyan banking system for selected investments in renewable energy and energy efficiency.
- v. A take-out facility could be created in which lenders could opt to exit the loan after each consecutive five year period. When exiting the loan the bank would transfer the loan to a separate vehicle (presumably owned or backed by public sources, a development finance institutions public-private partnership), which would take it on its balance sheet or transfer it to other interested parties. The entity would need to build in margin risk, liquidity risk and project risk insurance. No defaulted (or soon defaulting) clients would be accepted by the facility. The take-out facility would address the issue of liquidity availability but would also help build capacity of the domestic banks through enabling and scaling deal and cash flows.
- vi. To address the lack of appropriate equity, including lack of early stage high-risk and high-return capital, a public venture capital fund could help support a more widespread attractiveness for private venture capital. A number of institutional funds are beginning to be active in the country and the equity returns are attractive, but the equity investment culture is difficult as a new structure.

A Kenyan results-based financing (RBF) mechanism could create the visible, long term, 'AAA' cash-flows needed to leverage significant amounts of private capital into emission reduction and pro-developmental projects. This would be a way of bringing about climate and development outcomes at least cost, while maximising private sector leverage. An RBF mechanism could take a number of forms, from a simple tender for verified outcomes to something more akin to a real financial instrument such as a put option for emission reductions. All of these would deliver enhanced value for money for taxpayers and significant private sector leverage.

Acknowledgements

We are indebted to a number of individuals and institutions with whom we have consulted as part of this work. These are:

- Actis
- Acumen Fund
- Agence Francaise de Développement
- Bank of America Merrill Lynch
- Camco
- Carbon Africa
- cdc Climat
- CG Dev
- Climate Bridge
- Climate Care
- Climate Change Capital
- Commercial Bank of Africa
- Danida
- Emerging Power Group
- European Investment Bank
- Fanisi Venture Capital Fund
- Global Environment Facility
- Innovator Capital Limited
- International Finance Corporation
- Kenya Association of Manufacturers
- Kenya Bankers Association
- Kenya Power
- Kenya Private Sector Alliance
- Kenya Tea Development Agency
- Lake Turkana Wind Power
- Ministry of Energy
- Ministry of Environment and Mineral Resources
- Ministry of Finance
- Ministry of Planning
- Open Capital
- OrPower 4
- Oserian
- Oxford Institute for Energy Studies
- Planet B Ventures
- Renewable Energy Ventures (K)
- Standard Bank
- Swedish International Development Cooperation Agency
- Tower Power Kenya
- Ubbink East Africa
- UK Department for International Development
- United States Agency for International Development
- World Bank
- World Economic Forum

In addition, the expertise and insights provided by the Finance Team's Thematic Working Group has been invaluable in guiding the research and recommendations.

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- i Updated Least Cost Power Development Plan 2011-2031*, Ministry of Energy, March 2011
- ii* Renewable energy is one possible solution but by no means the only one. Other power generation options will be necessary to meet Kenya's needs.
- iii* All biomass is renewable in the sense that it is CO₂ temporarily fixed in biogenic material, and when combusted that CO₂ is returned to the atmosphere. Not all biomass is sustainable, however.
- iv* Further research will be necessary into energy efficiency levels and potential in different sectors of the economy and regional of the country, as data is currently not widely available. Energy efficiency investment will have concomitant social and environmental benefits.
- v Electricity Sub-Sector Medium-Term Plan (2012-2016)*, Ministry of Energy, April 2012
- vi* This table is non-exclusive.
- vii* http://info.worldbank.org/governance/wgi/sc_chart.asp
- viii* http://info.worldbank.org/governance/wgi/sc_chart.asp
- ix* <http://www.doingbusiness.org/rankings>
- x* <http://cpi.transparency.org/cpi2011/>
- xi* The Knaepen Package is a system for assessing political risk. It classifies countries into eight risk categories (0 - 7) according to the likelihood that a sovereign government will honour its contractual obligations, the higher the category the higher the risk factor.
<http://www.oecd.org/dataoecd/9/12/35483246.pdf>
- xii* <http://www.erc.go.ke/erc/fitpolicy.pdf>. Large projects of 100 MW-plus in some renewable energy sectors can often exist without a FiT framework, but in other sectors it may be a necessary incentive.
- xiii* *Technical and Economic Study for Development of Small Scale Grid Connected Renewable Energy in Kenya*, Submitted to the Ministry of Energy through the Energy Regulatory Commission by Economic Consulting Associates and Ramboll, June 2012
- xiv* Recently ATI for the first time provided political risk for insurance to an IPP for an energy investment in Kenya.
- xv* *Technical and Economic Study for Development of Small Scale Grid Connected Renewable Energy in Kenya*, Submitted to the Ministry of Energy through the Energy Regulatory Commission by Economic Consulting Associates and Ramboll, June 2012
- xvi* Source: Vivid Economics (2012). Note that data is not available post-2008.
- xvii* The CEEC recently provided training on energy efficiency to 132 government staff.
- xviii* Most private equity firms seek an annual rate of return of 25 per cent or more and to exit within five years.
- xix* Stanbic is the only bank in Kenya with extensive experience in project finance for renewable energy, via their operations in South Africa.
- xx* Though this is not always true. Due to frequent administrative delays and conditions inherent with IFI lending, project developers sometimes chose to finance projects independently.
- xxi* For example, industrial end-users are more concerned with enhancing operations through improved production and productivity rather than with reducing operational costs, including through energy efficiency measures.
- xxii* As of August 2012 the Climate Innovation Centre is in the process of being established.