

Investment Incentives for Renewable Energy in Southern Africa: The case of Mozambique

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Introduction

Energy markets around the world face many challenges. Conventional supplies of fossil fuel reserves are becoming increasingly scarce, leading to rising prices. At the same time, concerns over climate change are growing, increasing the urgency for countries to decouple greenhouse gas emissions from economic growth.

All of these pressures have greatly raised the profile of renewable energy technologies (RETs), with governments now commonly providing a range of incentives to attract investment.

In developing countries, government support for renewable energy is complicated by the need to simultaneously expand access to energy more generally, as a cornerstone of poverty eradication and improvement of living standards. Mozambique has one of the lowest levels of access to electricity for its population compared to other Sub-Saharan countries. According to national statistics, the electrification coverage of Mozambique's national grid reaches 21 per cent of the population (Electricidade de Mocambique [EDM], 2011), with another 11 per cent of the population with access to off-grid technologies (Fundo de Energia [Energy Fund] (FUNAE), 2012). Furthermore, 80 per cent of the country's 22 million inhabitants rely on primary biomass for cooking and heating purposes.

Frameworks and incentives should attract private finance and maximize the benefits generated by natural resources while expanding energy access and keeping energy affordable for consumers and industry. Projecting present electrification growth rates out to 2030, an increasing number of people in sub-Saharan Africa will be without access to electricity if no alternative electrification mechanisms are implemented.

In order to achieve this difficult balancing act, policy-makers must know what kinds of investment incentives are most effective at raising capital for renewable energy projects and what amount of support is affordable and reasonable.

This report assesses investment incentives in Mozambique and their impact on renewable energy. While the vast majority of Mozambique's investment incentives are not targeted specifically at renewable energy, many are broad enough in scope and coverage to have an impact on the sector. The report focuses on hydropower, solar photovoltaic (PV) and biofuels— the most common renewable energy sources in the country. By analyzing the investment incentives available, and drawing on insights from representatives of government and industry, it suggests some initial findings on the extent to which Mozambique's investment incentives are effective and affordable means to encourage the development of renewable energy. The report then identifies further research that could usefully be conducted in this area.

The analysis is part of a series of reports that aim to conduct an initial, exploratory assessment of such incentives in developing countries around the world.

2.0 Definitions and Methodology

2.1 Definitions

There is no one agreed definition of “investment incentives.” Thomas (2007) defines them narrowly as “a subsidy given to affect the location of investment,” while UNCTAD (2004) defines them more broadly as subsidies intended to attract foreign or domestic investment using: financial incentives (such as grants and loans at concessionary rates); fiscal incentives (such as tax holidays and reduced tax rates); subsidized infrastructure or services; and concessions or exemptions from regulations and standards.

This study follows the broader UNCTAD definition, recognizing that the vast majority of renewable energy subsidies cannot focus merely on attracting investment to a particular location, but must also provide the financial support that makes such investments viable at all. Thus, in this report, the terms investment incentive and subsidy can be considered interchangeable, to the extent that the subsidy in question can be argued to affect investment decisions.

It should be noted, however, that the two terms do not include measures that are intended to remove existing market distortions that are a barrier to renewable energy. For example, none of the following measures would be considered to qualify as investment incentives: the removal of fossil energy subsidies; regulation intended to remove barriers to renewable energy entering the energy market; or the use of taxation and payments to internalize positive and negative externalities. While such measures are not the focus of this report, they are identified and factored into assessments where relevant.

The evaluation of the impacts of investment incentives is based on two specific goals:

1. Choice of location of the renewable energy project. This goal is understood as the effect of the incentive on the firm’s decision to choose a location and invest in a renewable energy project. The primary objective of the incentive is to increase the likelihood of choosing a targeted location.
2. Continuation of the existing investment. In addition to possible impacts on the choice of investment location, a subsidy could help to retain and expand existing facilities. Investment incentives often have short-term impacts on investment decisions. A price subsidy should not be seen as a source of long-term profit. Typical questions are whether and how the incentives affect the decision of the investor to retain the investment.

2.2 Evaluation Approach

Two main research methods were used to collect data for this study: desk research and structured interviews.

The desk research focused on reviewing three issues: i) the current state of Mozambique’s energy supply and demand as well as the structure of its energy industry; ii) the laws and regulations that govern Mozambique’s energy industry and other related laws and regulations concerning tax and investment in general; and iii) general issues that affect renewable energy markets, such as ease of doing business. Sources reviewed included government reports, research papers and media articles.

Interviews were held with a range of stakeholders, including representatives from government ministries, intergovernmental organizations and private sector companies operating in the energy sector.

Interview questions were tailored to suit each respondent's background or institution, but all focused on how best to develop renewable energy in Mozambique. Respondents were asked to identify the main impediments to developing the renewable energy industry, to critique current investment incentives and to suggest alternative incentive schemes the government could apply to attract investment.

The study focused on gathering data from the National Directorates; the electricity regulator (*Conselho Nacional de Electricidade* or CNELEC); the energy fund (*Fundo de Energia*, or FUNAE); the main companies involved in the energy sector, namely *Electricidade de Moçambique* (EDM) a power utility and *Hidroeléctrica de Cahora Bassa* (HCB), the biggest independent power producer; and Mozambique Transmission Company (MOTraCO), an electricity transmission company.

The study begins with a summary of the energy sector in Mozambique in **Section 3: Overview of the National Energy Sector**. It then gives an overview of the investment framework, focusing on investment incentives in **Section 4: Investment Incentives and Renewable Energy**. **Section 5: Discussion and Analysis** analyzes the extent to which existing incentives have adequately addressed barriers to renewable energy. Finally, **Section 6: Conclusions and recommendations** summarizes the report's conclusions and provides a number of recommendations to help improve investment policies.

3.0 Overview of the National Energy Sector

Mozambique's energy sector plays an important role in the economy, providing necessary inputs for economic production and other related activities. The sector has been dynamic over the past 10 years with considerable change in energy supply and demand, especially in power generation, transmission and distribution.

3.1 Energy Supply

Mozambique's total primary energy supply (TPES) in 2009 was 408.9 petajoules (PJ). Biomass provided 78 per cent of the country's energy needs, followed by hydro (14 per cent) and oil products (7 per cent) (International Renewable Energy Agency [IRENA], 2012). The current use of coal and natural gas is marginal, accounting for about 1 per cent of the TPES. Most of Mozambique's natural gas production is exported. All oil products are imported, and their cost accounts for 15 per cent of the country's total imports, making Mozambique vulnerable to increases in their price. Mozambique has no significant proven reserves of oil and no domestic upstream or downstream production capacity. Imports are used to meet domestic demand for refined oil products, amounting to 14,540 barrels of oil per day (IRENA, 2012). Coal reserves are significant, with an estimated reserve of 4 billion tonnes (IRENA, 2012). Natural gas reserves and production in Mozambique are substantial and are likely to remain important in the future. As of 2011, proven reserves of natural gas were estimated at 127 billion cubic meters (m³) (IRENA, 2012): the 51st-largest proven reserves in the world and the third largest reserves in the Southern African Development Community (SADC) region.

In addition to fossil fuels, Mozambique also has significant potential to develop most types of renewable energy resources. It has an estimated potential of around 12,000 megawatts (MW) of hydropower energy, according to pre-feasibility studies that surveyed specific sites with reliable hydrological data (EDM, 2004). To this point, potential for other renewable energy resources has not been estimated in much detail, but some data are available. Solar energy resources are available throughout the whole country, with an average solar radiation of 5.7 kWh/m²/day (Cuamba et al., 2006). Wind energy resources along the coast line and in the highlands of the interior are in excess of 6 m/s on average ("Support for Wind Power," 2008). The country also has significant ocean and geothermal energy resources [Hammar et al., 2012; Martinelli, Dongarr, Jones, & Rodriguez, 1995].

3.2 Electricity Generation

Until 1977—HCB's first year of full commercial operation—thermal power plants were the major source of electricity generation in Mozambique, with small contributions from hydropower feeding localized and isolated grids. Demand was also met from imports. However, HCB's operations reduced the share supplied by thermal in favor of hydro. In 1981, when the civil war severely affected the transmission infrastructure, localized backup generation and import of electricity from neighbouring countries increased. Imports were particularly significant in Maputo during the period of internal strife, where demand was high and domestic supply low. The conflict ended in 1992, and the electricity network began to be rehabilitated, albeit with significant funding constraints. The increasing capability of the transmission system and the construction of new lines connecting the provincial capitals led to greater domestic use of HCB's output, as shown in the Figure 1.

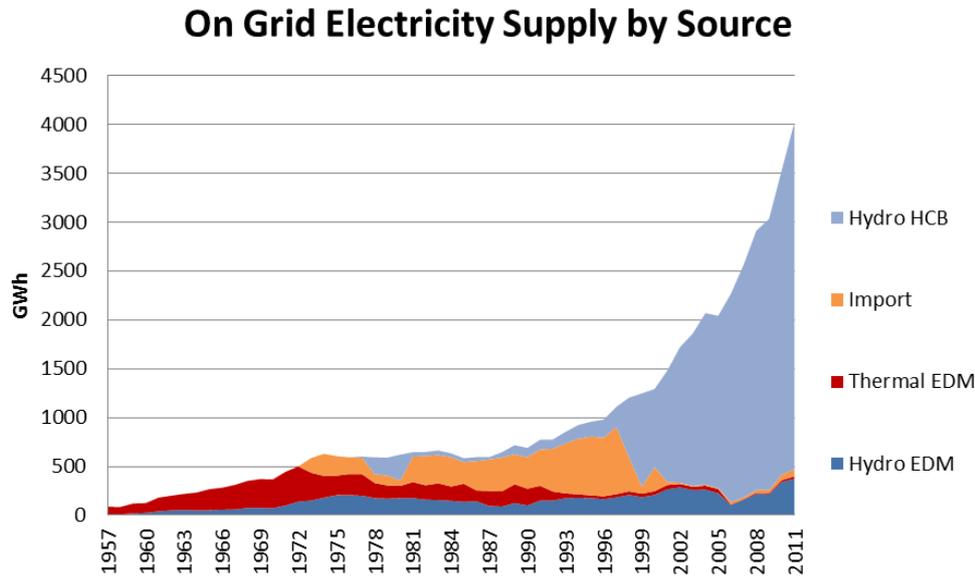


FIGURE 1: ELECTRICITY CONSUMPTION BY SOURCE FROM 1955 TO 2011

Source: EDM, 2011.

As Figure 1 shows, national demand for electricity began to grow significantly in 1996, with a heavy reliance on a single source—HCB. This is due to:

- Phasing out of inefficient thermal electric generation capacity.
- Low investment in new hydropower and other available clean sources, such as natural gas.
- Reduced imports due to the improvement and availability of transmission systems.

3.3 Role of the Private Sector

HCB is the main electricity provider to the Mozambican grid, an independent power producer (IPP) with 2,075 MW of installed capacity supplying power to the Mozambican, South African and Zimbabwean grids through bilateral power purchase agreements (PPAs). Other IPPs are emerging, particularly in the field of hydro generation.

Based on the Electricity Master Plan and the Generation Master Plan, the deployment of new electricity generation capacity will need to include private initiatives with the strategic participation of the public sector using public-private partnerships (PPPs). PPPs have been used for large-scale hydropower projects but are less common at the small scale.

3.4 Primary Renewable Energy Technologies

3.4.1 Hydropower

As mentioned earlier, hydropower is the dominant form of electricity production in Mozambique. There are a considerable number of developments underway to meet domestic demand and enable exports of clean and reliable power to the regional market. Table 1 outlines the hydropower projects in Mozambique under development as of 2010 (EDM, 2011).

TABLE 1: PIPELINE OF MAIN RENEWABLE ENERGY PROJECTS IN MOZAMBIQUE

PROJECT NAME	TYPE OF PLANT	LOCATION	SIZE	STATUS (AS OF 2010)
Mphanda Nkuwa (PPP)	Hydro	Tete	1,500 MW	Commercial agreements
CB North Bank (IPP)	Hydro	Tete	1,245 MW	Pre-feasibility
Lupata (PPP)	Hydro	Tete	600 MW	Feasibility
Boroma (PPP)	Hydro	Tete	200 MW	Feasibility
Lürío (PPP)	Hydro	Cabo Delgado	120 MW	Feasibility
Ruo (PPP)	Hydro	Zambezia	100 MW	-
Mavuzi 2&3 (PPP)	Hydro	Manica	60 MW	Conceptual
Malema (PPP)	Hydro	Nampula	60 MW	Pre-Feasibility
Massingir (PPP)	Hydro	Gaza	27 MW	Pre-Feasibility
Total			3,912 MW	

3.4.2 Solar PV

Solar energy is gradually beginning to play a significant role in the country’s electrification. A challenge for electrification has been the mismatch between where power is produced and where it is consumed. Another problem has been the sheer size of the country, which requires long transmission lines that increase the risk of blackouts, voltage regulation problems and vulnerability of the infrastructure. Consequently, decentralized energy systems such as solar PV can play a valuable role.

More than 1.2 MW of photovoltaic system capacity was installed between 2000 and 2011, as shown in Figure 2. Around 1,500,000 people benefit from the systems that have been installed, representing about 0.8 W_p of solar PV per person. Although in terms of wattage the quantity is small, its ability to improve health and educational services in rural areas is significant.

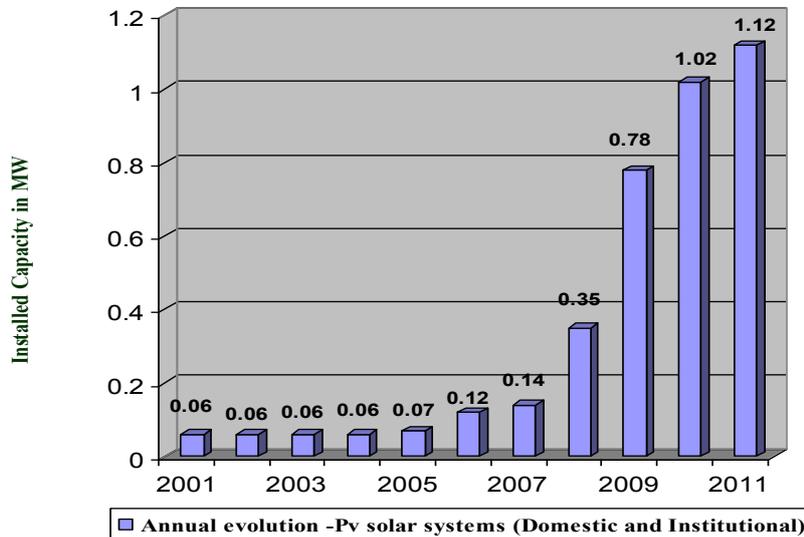


FIGURE 2: ANNUAL EVOLUTION OF PHOTOVOLTAIC SYSTEMS INSTALLED, ADAPTED FROM FUNAE, 2012.

Source: FUNAE, 2012.

3.4.3 Biofuels

Between 2008 to 2012, 21 biofuel projects were approved (Table 2). Biofuels are controversial. Proponents argue that the projects have increased local economic activity, particularly in the agro-industry. However, there have been concerns about the unintended negative impact of biofuel projects on food prices. Mozambique's biofuels policy officially states it won't promote projects which lead to a conflict with food production and assesses the risks and benefits of various types of feedstocks (for example, the production of ethanol from sugar cane is seen as a way of optimizing agro-industrial activity).

TABLE 2: PRIVATE INVESTMENT PROJECTS IN THE AREA OF BIOFUELS

PROJECT TITLE	PROJECT OBJECTIVE	LOCATION	AREA [HA]	INVESTORS	IMPLEMENTERS	INVESTMENT AMOUNT (US\$)	SOCIOECONOMIC BENEFITS
Energem	Production of vegetable oils and biodiesel for the energy transformation industry	Province of Gaza, District of Bilene, Locality of Chilengue	-	Energem STP, Ltd (Guernsey Island) Deulco Mozambique, Ltd (Man Island)	Energias Alternativas Renováveis, Lda	2,000,000	200 national employees and two foreign
Enerterra	Plantation of jatropha curcas and subsequent production of biodiesel and bioelectricity and also fertilizers	Province of Sofala, District of Cheringoma	20,000	ENR II-SGPS, SA (Portugal) Vianney Vales (France) Juan Miguel Martin Iglesias (Spain) SPI-Gestão e Investimentos, SA (Mozambique)	Enerterra, SA	53,305,350	20 national employees and five foreign
Grown Energy Zambeze	Plantation of sugar cane for production of industrial bioethanol	Province of Sofala, District of Chemba, Administrative Post of Chemba	15,000	TATA Chemicals Limited (India) Fieldstone Private Capital Group Ltd (U.K.) Grown Energy (Pty) Ltd (South Africa) FMO (The Netherlands) Rademan Janse van Rensburg (South Africa)	Grown Energy Zambeze Lda	224,326,000	2,000 national employees and 90 foreign
Hende Wayela Energia	Production of biodiesel from coconuts	Province of Inhambane, District of Homoine	-	Headway Energy (Pty) Limited (South Africa) 3D Mining (Pty) Limited (South Africa) José Abel Jonasse (Mozambique)	Hende Wayela Energia Lda	725,000	56 national employees and three foreign
Luambala Jatropha	Plantation of jatropha curcas and subsequent production of biodiesel	Province of Niassa, District of Majune	10,000	Chikweti Forests of Niassa, Sarl (Mozambique) Silvestria Utveckling AB (Sweden)	Luambala Jatropha Lda	400,000	160 national employees and three foreign
Moçambique Inhluvuka-Bio-combustíveis	Plantation of jatropha curcas and subsequent production of biodiesel	Province of Maputo, District of Manhiça	5,348	Gaetan Ng Chiu Ning Ming (Swaziland); Demetrius Haralambos Pappadopoulos (South Africa).	Moçambique Inhluvuka-Biocombustíveis, Lda	4,000,000	500 national employees and five foreign
Montara Mozambique	Plantation of jatropha curcas and sugar cane and subsequent production of biofuels	Province of Cabo Delgado, District of Namuno, Administrative Post of papai	9,875	Montara Continental Ltd (Seychelles) International Business Authority (Seychelles) Meshack Jeremiah Opolukwa (Tanzania)	Montara Mozambique Lda	3,800,000	45 national employees
Pilot agro industrial project on biofuels	Plantation, commercialization and industrial processing of maize, cassava and soya for production of biodiesel and its derivative	Province of Zambézia, Mocuba City	1,000	Mozfuel Limited, BV1 company nº 1437799 (South Africa) Bernardo Pedro Ferraz (Mozambique)	Mozambique Biofuel Industries Lda	796,500	170 national employees and five foreign

PROJECT TITLE	PROJECT OBJECTIVE	LOCATION	AREA [HA]	INVESTORS	IMPLEMENTERS	INVESTMENT AMOUNT (US\$)	SOCIOECONOMIC BENEFITS
Mozambique Principle Energy	Plantation of sugar cane for production of bioethanol	Province of Manica, District of Dombe, Administrative Post of Sussundenga	18,000	Silex Management Limited	Mozambique Principle Energy Lda	280,000,000	-
Niqel	Plantation of jatropha curcas and subsequent production of oil for export	Province of Sofala, District of Buzi, Locality of Grudja	-	Nicolaas Jacobus Gagiano (South Africa) Neli José Daniel Nhassengo (Mozambique)	Niqel Limitada	7,500,000	305 employees
Ouro Verde	Plantation of sugar cane for production of bioethanol	Province of Cabo Delgado, Districts of Chiúre and Balama	2,000	Sekab Biofuels and Chemicals AB (Sweden) Svensk Etanolkemi International AB (Sweden)	Ecoenergia de Moçambique Lda	730,000	15 employees
ProCana	Plantation of sugar cane, installation of an ethanol and refined sugar factory and production of electric energy and fertilizers	Province of Gaza, District of Massingir	30,000	Central African Mining Exploration Company (London) Biolimpopo, Lda (Mozambique) Izak Cornelis Holtzhouse (Mozambique)	ProCana Lda	500,000,000	7,000 national employees and 150 foreign
Quifel Agricola	Plantation of soya and sunflower for production of vegetable oils	Province of Zambézia, District of Guruè	-	Quifel Natural Resources, SA (Portugal) Rui Manuel da Rosa Laurentino (Portugal) LIOMA-Agricultura e Projectos de Gestão, Limitada (Moçambique)	Quifel Natural Resources Moçambique, Limitada	17,535,440	1,000 national employees and five foreign
Sab Mozambique	Plantation of jatropha curcas and subsequent production of oil for export	Province of Inhambane, Districts of Panda and Inharrime	-	Seci Api Biomasa, S.r.l. (SAB) (Italy) Leonardo Business Consulting, S.r.l (Italy) Simoni Santi (Italy)	Sab Mozambique, SA	17,240,000	450 national employees and four foreign
Sun Biofuels	Plantation of jatropha curcas and subsequent production of biodiesel	Province of Manica, District of Manica, Administrative Post of Messica	5,167	Sun Biofuels Mozambique U.K., Ltd Henry Mathew Stourton Julian Michel Ozanne	Sun Biofuels Mozambique, SA	7,086,250	500 national employees and two foreign
Zamcorp Indico Cluster AJ1	Plantation of jatropha curcas and subsequent production of biodiesel	Province of Sofala, District of Dondo, Administrative Post of Savane	20,870	Geocapital - Investimentos Estratégicos, SA (Macau) Mozacapital - Sociedade de Investimentos e Gestão, SARL (Mozambique)	Ecoenergia de Moçambique, Lda	12,800,000	600 national employees and 28 foreign
Bioenergia Moçambique	Plantation of jatropha curcas and subsequent production of biodiesel	Maputo Province, Moamba District, Vundiça Locality	6,950	Moncada Energy Group, S.A.R.L (foreign) Humba, Lda (national) 3T, Lda (national)	Bioenergia Moçambique, Lda	13,566,000	1089 national employees and two foreign

PROJECT TITLE	PROJECT OBJECTIVE	LOCATION	AREA [HA]	INVESTORS	IMPLEMENTERS	INVESTMENT AMOUNT (US\$)	SOCIOECONOMIC BENEFITS
C3 Biodiesel	Plantation of jatropha curcas and subsequent production of biodiesel	Inhambane	-	C3 Africa Ltd (Chipre) Adam Leslie Simcock (U.K.)	C3 Moçambique, Lda	3,000,000	60 national employees and three foreign
Deulco Emvest	Plantation of jatropha curcas and subsequent production of biodiesel	Province of Maputo, District of Manhiça, Locality of Tanginga	1,220	Emvest Biofuels Ltd (Mauritius) Pro Alia Investment Ltd (Mauritius)	Deulco Emvest, Lda	1,900,000	260 national employees and five foreign
Ecomoz	Production of biodiesel	Province of Maputo, Matola City Province of Sofala, Beira City Province of Nampula, Nacala City	-	Petromoc, SARL Biomoz, Lda Bioenergia, SARL Hende Wayela Energia, Lda	Energias Alternativas Renováveis, Lda	4,000,000	57 national employees and three foreign
Elaion Africa	Plantation of jatropha curcas and subsequent production of biodiesel	Province of Sofala, District of Dondo, Locality of Savane	-	Elaion AG (Germany); Markus Speiser (Austria)	Elaion Africa, Lda	100,000	34 national employees and one foreign
TOTAL:			145,430			1,154,810,540	14,521 national employees and 316 foreign

Source: List of biofuel projects submitted to CPI 2009–2012 (Emílio Ussene, CPI, personal communication, 2013).

4.0 Institutions and Regulations Governing Renewable Energy

This section describes the key institutions and companies that are active in developing renewable energies, as well as the legal and regulatory framework that governs the sector.

4.1 Policy-Makers and Implementers¹

Mozambique's energy sector has a complex institutional structure. At least three government agencies are directly involved in formulating or implementing renewable energy policy at a national level, with local governments and a number of other government agencies also having influence over either policy or its implementation.

- **The Council of Ministers:** In charge of setting energy sector policy and strategy, as well as granting concessions authorizing private agents to enter the market. According to the current electricity law and regulations (Decree No. 8/2000) authorizations to install a power station of 100 megavolt ampere (MVA) or above are granted by the Council of Ministers.
- **The Ministry of Energy (MOE):** Established in 2005, the MOE is responsible for managing the energy sector in the country (Presidential Decree, 2005). The MOE is comprised of three technical national directorates: the National Directorate of Electrical Energy, the National Directorate of New and Renewable Energies and the National Directorate of Fuels (Ministerial Order, 2005; Presidential Decree, 2005).
- **National Directorate of Electrical Energy:** Deals with all conventional forms of electricity production, transmission, and distribution and use, including large-scale hydro and transmission systems. The directorate is responsible for the long-term planning and integration of electricity infrastructure. It also performs some basic regulatory roles, such as issuing and monitoring licenses to technicians and electrical installations.
- **National Directorate of New and Renewable Energies:** Deals with all non-conventional forms of energy production, transmission, distribution and use, with a focus on renewable energies. The directorate has been focusing on the establishment of a legal framework for the integration of new and renewable energies into the national energy matrix.
- **National Directorate of Fuels:** Deals with all types of fuels at the downstream level, excluding biofuels, which fall under the National Directorate of New and Renewable Energies
- **Conselho Nacional de Electricidade (CNELEC):** Is the electricity regulator and shares some regulatory functions with the MOE. Its functions are being updated to expand and strengthen its role as a regulator
- **Energy Fund (FUNAE):** is a state agency responsible for promoting off-grid energy access and fuel distribution to remote locations.

The following diagram provides a simplified overview of the parts of government operating in the energy and investment space.

¹ This section draws mainly basing on GIZ/MoIT (2011)

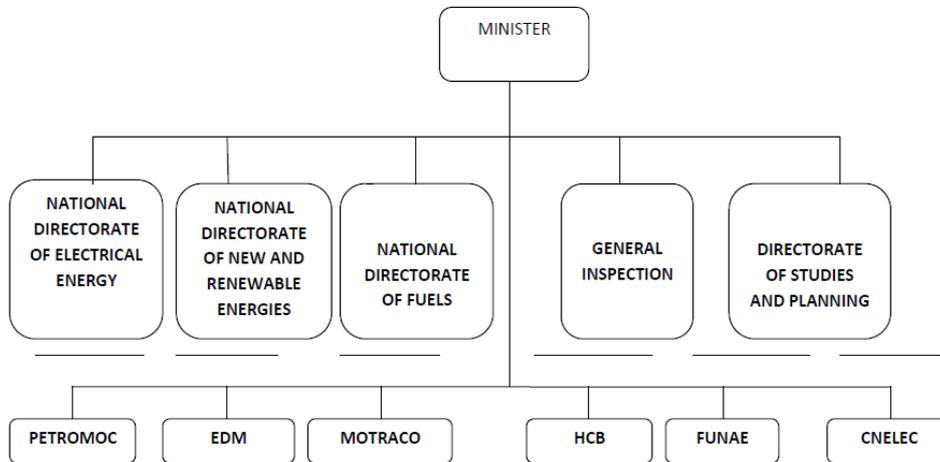


FIGURE 3: ORGANIZATIONAL STRUCTURE OF THE MOE

Sources: Ministerial Order, 2005; Presidential Decree, 2005.

4.2 Subjects of Policy

The subjects of energy policy—and who, in turn, often seek to influence policies to meet their needs and interests—include parts of the Mozambique government, several state-owned enterprises and, in certain segments of the industry, private companies. This includes:

- i. **The Investment Promotion Centre (CPI) and Office for Accelerated Economic Development Zones (GAZEDA):** Supervised by the Ministry of Planning and Development (MPD) these offices are responsible for assisting investors during planning and project implementation. The CPI is responsible for administering the Investment Law (Law 3/93) and for monitoring and verification of compliance with the terms and conditions contained in authorized investments grants (Investment Promotion Centre [CPI], 2013).
- ii. **The Institute for the Promotion of Small and Medium Enterprises (IPEME):** Supports activities for micro, small and medium enterprises (MSMEs) and is supervised by the Ministry of Industry and Trade (MIC). The IPEME supports private sector activities focusing on licensing facilitation, development of business plans and management/mobilization of financial resources.
- iii. **Electricidade de Moçambique (EDM):** Is a state-owned electric utility that provides around 97 per cent of Mozambique's electricity. In addition, EDM manages the national transmission system and the dispatch control centre.
- iv. **Hidroeléctrica de Cahora Bassa (HCB):** HCB is a 2,075 MW hydropower plant owned by the government of Mozambique. It supplies most of the national demand and exports almost 90 per cent of its production to South Africa.
- v. **Mozambique Transmission Company (MoTraCo):** a joint venture between the power utilities of Mozambique, South Africa and Swaziland transporting electricity from South Africa to the aluminum smelting plant in Maputo (MOZAL).

- vi. **Renewable energy companies:** Around 20 companies (mostly based in Maputo) generally specializing in photovoltaic installations, small-scale hydro and biofuels. In recent years there has been some private interest in wind and solar thermal energies.²
- vii. **Pico photovoltaic systems assembling factory:** Fosera Southern Africa Limitada, a private factory in Maputo, assembles pico solar photovoltaic systems. It currently assembles 1.5 W_p, 2.5 W_p and 5.0 W_p solar PV kits for household lighting and cellphone charging.³
- viii. **Assembling plant for solar PV modules:** A factory for assembling photovoltaic modules with a capacity of 5 MW_p per year is being constructed in the province of Maputo as a result of agreements between the Mozambican and the Indian governments.

4.3 General Renewable Energy Policy Framework

In 1997, Mozambique began reforming its electricity sector. The key legislation is as follows:

- i. **The Electricity Law or Act (Law 21/97, from 1st October 1997):** Introduced to regulate the production, transmission, distribution and commercialization of electricity. It established the principle of granting individual concessions for specific activities and created the advisory body CNELEC, acting as the regulator, as well as the Energy Fund (FUNAE), for the promotion of rural energy services. The Electricity Law opened electricity production, distribution and retail segments of the market to private operators through concession contracts issued by the MOE.⁴
- ii. **The National Energy Policy:** Adopted in 1998 (Decree No. 5/98, of 3rd March, 1998) sets out the policies guiding the direction of Mozambique's energy sector. The National Energy Sector Strategy was established by Decree 24/2000 (3rd October 2000) to implement the policy. It was revised in 2009 to reflect changing priorities and actions.
- iii. **Development of New and Renewable Energy Policy:** Established through Resolution No. 62/2009 to promote greater access to clean energy services through the use of equitable, efficient, sustainable and culturally sensitive sources of new and renewable energies. In 2011, the Strategy for New and Renewable Energy Development (EDENR) 2011–2025 was adopted to develop domestic renewable energy, diversify the energy mix, meet demand for energy and protect the environment. This is to be accomplished through on-grid and off-grid technologies (with the off-grid component linked to the Action Programme for Reduction of Absolute Poverty II and III (PARPA II/III) which promotes electrification to achieve poverty alleviation and economic development in rural Mozambique).
- iv. **The National Policy and Strategy for Biofuels:** This strategy identifies biofuel's capacity to deliver on economic and energy policy objectives and forms the basis of the National Program for the Development of Biofuels (PNDB), which is the implementing program of the Inter-ministerial Committee on Biofuels (CIB). The objectives of the policy are: firstly, to promote agro-energy resources for energy and food security; secondly,

² At present there are no private companies working in the area of ocean and geothermal energies.

³ There are plans that the factory will produce 10 W_p solar PV kits for schools, health centres and appliances like DC televisions and laptops. The factory uses German technology.

⁴ Following the Electricity Law, a number of supporting decrees have subsequently defined the roles of CNELEC (Decree 25/2000, of 3rd October 2000). The concession for the operation of the transmission network was awarded to EDM (Decree 43/2005, of November 29, 2005). The methodology by which tariffs are set was also established (Decree No. 42/2005, of 29th November);

to encourage socioeconomic development (based on the multiplier effect and development of by-products); and, thirdly, to address the volatility of fossil fuel prices in the international market as well as to reduce the country's dependence on fuel imports. The National Policy and Strategy for Biofuels will be implemented in three phases, progressively increasing the proportion of biofuel in Mozambique's domestic liquid fuel mix.

4.3.1 Research and Development Legislation

- i. **Resolution No. 23/2003:** Establishes the science and technology policy for Mozambique and the strategy for its implementation, which seeks, inter alia, to promote the link between research and private sector activities;
- ii. **Decree No. 12/2005:** Creates the National Research Fund (FNI) to promote scientific research and technological innovation, by providing funds through a competitive process. FNI promotes activities linking research institutions and the private sector, in order to enable knowledge transfers. Energy research and development activities are a priority area for funding by FNI.

5.0 Overview of the Investment Incentive Framework

Soon after the end of Mozambique's internal conflict, the government started a program to attract both domestic and foreign investment to rebuild the country. As noted in the introduction, the government of Mozambique has not developed incentives that are targeted specifically at the renewable energy sector, but rather has designed broader incentives with other goals in mind, such as encouraging investment in certain parts of the country, generating employment and promoting exports. This section describes the major investment incentives currently on offer, beginning with the most important pieces of legislation. The subsequent section identifies those incentives which have been used by renewable energy investors, based on interviews.

- i. **The Investment Law (Law No. 3/93):** Establishes a uniform framework for investments and provides tax incentives for investors;
- ii. **Decree No. 47/2008:** Creates the Institute for Promotion of Small and Medium Enterprises (IPEME) and, in practice, includes microenterprises. The objective of IPEME is to assist micro, small and medium enterprises (MPMEs) established as categories of enterprises through Decree No. 44/2011 (21st September 2011).
- iii. **Law No. 4/2009 the Code of Fiscal Benefits:** Provides fiscal benefits such as exemptions and reductions on value-added taxes (VAT), investment tax credits, corporate income and tax deductions in order to attract investors.
- iv. **The Public-Private Partnerships Law (Law No. 15/2011):** Establishes norms for contracting, implementation and monitoring of public-private partnerships for large scale projects and company concessions. Large projects are defined as those involving more than MZN12,500,000,000⁵ (US\$416 million) of investment.
- v. **Law No. 3/2012:** Altered the way value-added tax for certain projects was calculated. VAT will be applied to 40 per cent of the price of the products or services for projects implemented by public entities.

The principles governing the organization of the national tax system are contained in the following laws:

- Law 15/2002 of 16th June 2002–Law on the Basis of the Tax System
- Law 02/2006 of 22nd March 2006–Law on General Taxation.

Investment incentives offered to some economic activities involve favourable tax rates. The subcomponents of the taxation system commonly used to stimulate investments through fiscal benefits are:

Corporate Tax (IRPC) of 32 per cent

The IRPC is applicable to private companies and any other public or private corporations with headquarters or management functions based in Mozambique. Income (including that obtained outside the national territory) is subject to IRPC, while recognizing any applicable international double tax treaties.

⁵ Mozambique *meticals*. At time of writing (August 2013) the exchange rate was US\$1 = MZN 30.

Value-Added Tax (VAT) of 17 per cent

VAT is applicable to the value of the supply of goods and services in the national territory and to the importation of goods. To calculate the monthly VAT payable to the state, taxable entities deduct the input tax on the acquisition of goods and services from other taxable entities.

Customs and Import Duties

Import duties are levied on the value of goods to be imported or exported through Mozambique’s borders (customs territory). The cost, insurance and freight (CIF) value is normally applied. The rates for a selection of products are provided in the table below.

TABLE 3: MOZAMBIQUE CUSTOMS AND IMPORT DUTIES FOR A SELECTION OF PRODUCTS

DESCRIPTION	CLASS	RATES
Raw materials	M	2.5%
Intermediate goods	I	7.5%
Capital goods	K	5.0%
Consumer goods	C	20%
Essential goods	E	0.0%
Fuel	N	5%
Electricity	W	0.0%

Source: Customs Tariff Schedule, n.d.

5.1 Location-Based Incentives

Mozambique provides incentives to drive investments toward specific areas of the country. These policies are intended to deliver economic benefits to the country, in particular by expanding productive and commercial capacity, widening the tax base, creating jobs, generating foreign exchange earnings and providing regional development.

Location-based incentives are classified in several categories:

Rapid development zones: Are under the supervision of the Centre for Promotion of Investments (CPI). These are geographic areas with significant natural resource potential but lack infrastructure and have a low level of economic activity. These areas include: the Zambezi River Valley Zone, Niassa province, Nacala district, Mozambique Island and Ibo Island⁶ (see Figure 4—the administrative map of Mozambique—for more details). Eligible activities for fiscal benefits in these zones are: agriculture, tree plantations, water supply, electricity generation, transmission and distribution, telecommunications and industry as well as others. These zones benefit from lower customs duties and a VAT exemption and also from fiscal benefits in respect to company income;

Investments carried out in rapid development zones benefit from an exemption from payment of customs duties and VAT on the import of goods in class “K” of the Customs Tariff Schedule (*Pauta Aduaneira*), which includes accessories and spare parts. Investments also benefit for a period of five tax years from an investment tax credit equal to 20 per cent of the total investment realized, deductible from the corporate income tax (IRPC) payable (but which shall not exceed the tax otherwise payable).

⁶ Zones are approved by the competent authority under Law 3/93 of 24th June 1993 on investments.

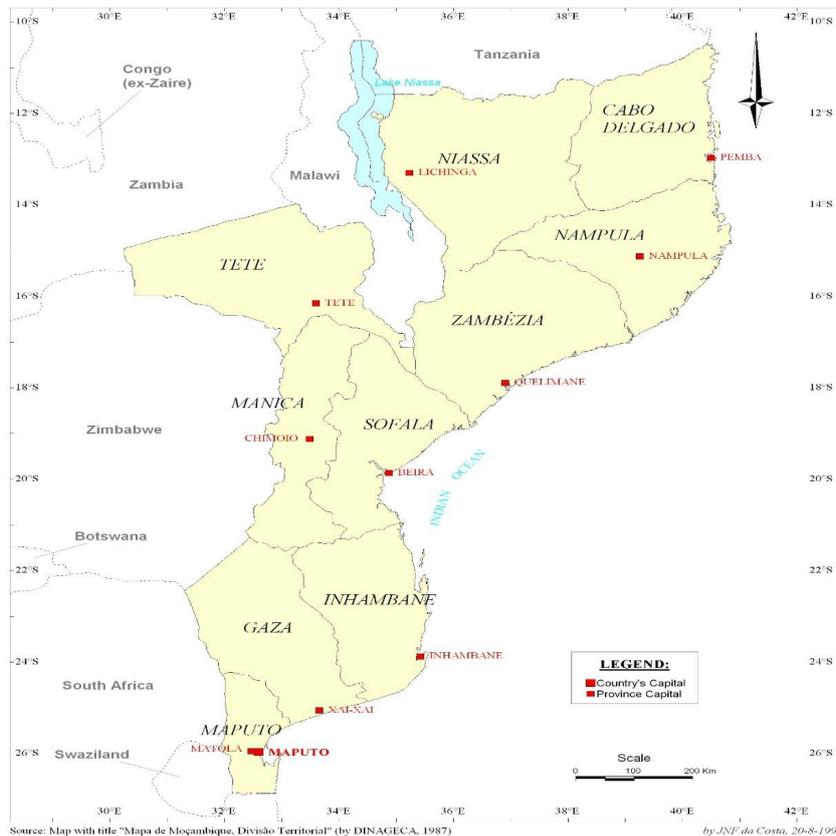


FIGURE 4: ADMINISTRATIVE MAP OF MOZAMBIQUE

Source: *Maps of the world*, n.d.

Free Industrial Areas (ZFI): Are areas of industrial activity geographically delimited and regulated by a specific customs regime. Export goods produced within these areas are exempted from customs duties, related taxes or parafiscal charges.

In particular, enterprises in industrial free zones are exempt from customs duties on the import of construction materials, machinery, equipment, accompanying spare and accessory parts and other goods used in the carrying out of the licensed activities. Enterprises are also exempt from customs duties on the importing of goods and merchandise to be used in the implementation of projects and exploration of authorized activities. The exemption also includes VAT both on the import and on internal acquisitions as provided for in the VAT code.

In addition, from the date of the issuance of the respective certificate, enterprises in the free industrial areas benefit from the following incentives with respect to corporate income tax (IRPC):

- IRPC exemption in the first 10 tax years.
- A 50 per cent reduction in the rate of IRPC tax from the 11th to the 15th tax year.
- A 25 per cent reduction in the rate of IRPC for the remaining life of the project.

The only declared ZFI so far is the Beluluane zone in the District of Boane 16 kilometres from the City of Maputo, occupying an area of about 700 hectares.

Special economic zones (ZEE): Are areas of general economic activity geographically delimited and subject to a special customs regime under which all goods entering, manufactured, transformed therein or exported from there are totally exempt from any customs, duties and fiscal or para fiscal charges. Furthermore, they benefit from a free exchange regime, including for offshore operations, appropriate fiscal, labour and immigration arrangements.

Developers and enterprises based in special economic zones benefit from an exemption from payment of customs duties on the import of construction materials, machinery, equipment, accompanying spare and accessory parts and other goods used to carry out the licensed industrial activities. This exemption also includes VAT both on the import and on internal acquisitions as provided for in the VAT code.

In addition, from the date of issuance of the respective certificate, special economic zones developers benefit from the following incentives with respect to corporate income tax (IRPC):

- IRPC exemption in the first five tax years.
- A 50 per cent reduction in the rate of IRPC from the 6th to the 10th tax year.
- A 25 per cent reduction in the rate of IRPC for the remaining life of the project.

From the date of issuance of the respective certificate, special economic zones enterprises benefit from the following incentives with respect to IRPC:

- IRPC exemption in the first three tax years.
- A 50 per cent reduction in the rate of IRPC from the 4th to the 10th tax year.
- A 25 per cent reduction in the rate of IRPC from the 11th to the 15th tax year.

Special economic zones have been declared in the districts of Nacala-Porto and Nacala-Velha, in Nampula Province, occupying an area of 1539 square kilometres, and Manga-Mungassa, in the City of Beira with an area of 217 hectares (see Figure 5).

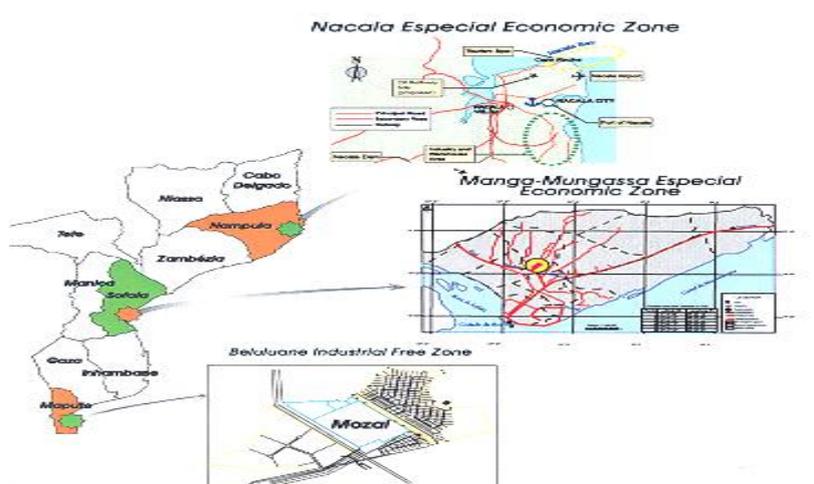


FIGURE 5: INDUSTRIAL FREE AND SPECIAL ECONOMIC ZONES

Source: Ministry of Planning and Development, n.d.

5.2 General Incentives

Investments carried out under the scope of the Investment Law (Law 3/93, of 24th June 1993) are entitled to the fiscal benefits defined in the Tax Benefit Code (TBC) (CPI, 2013). These include exemptions or reductions in the amount of tax to be paid for activities that have a recognized public good and encourage economic development in Mozambique. Fiscal benefits considered in the TBC include: deductions from taxable income, deductions from tax, accelerated depreciation, investment tax credits, exemptions and reduction in tax rates, and the deferral of tax payments.

The exemptions can be granted for the period of the first five years of the project implementation. The following fiscal benefits contained in the Tax Benefit Code may be relevant to renewable energy:

- i. **Benefits on the import of goods (Chapter 1 on General Benefits, Section 1, Article 14):** Qualifying investments are exempt from payment of customs duties and value-added tax on the importation of equipment classified as class “K” in the Customs Tariff Schedule (*Pauta Aduaneira*) including accompanying spare and accessory parts.
- ii. **Modernization and introduction of new technology (Chapter 1 on General Benefits, Section 2, Article 17):** Investments in specialized equipment shall for first five years of operation benefit from a deduction from taxable corporate income tax (IRPC) and certain activities relating to personal income tax (IRPS).
- iii. **Professional training (Chapter 1 on General Benefits, Section 2, Article 18):** The cost of professional training of Mozambican employees is deductible from taxable income for the purposes of calculating corporate income tax (IRPC) for the first five years of operations. In the case of professional training in the use of new technologies, the maximum amount deductible from taxable income increases. This applies also to personal income tax for certain activities. The investment cost does not include the cost of equipment and other assets of the company used in professional training.
- iv. **Creation of basic infrastructure (Chapter 2 on Specific Benefits, Articles 20 to 22):** Incentives are available to investments by the private sector or by public-private partnerships aiming to establish basic public infrastructure that is essential for the promotion and attraction of investments, including the construction and rehabilitation of roads, rail lines, electricity and telecommunications. These investments benefit from an exemption from the payment of customs duties and VAT on the import of goods classified as class “K” in the Customs Tariff Schedule (*Pauta Aduaneira*), including the accompanying spare and accessory parts.
- v. **Rural commerce and industry (Chapter 2 on Specific Benefits, Articles 23 to 24):** Incentives are available to investments in the construction and/or rehabilitation of infrastructure to be used exclusively for commercial and industrial activity in rural areas. These investments benefit from an exemption from customs duties and VAT on the import of goods classified as class “K” in the Customs Tariff Schedule (*Pauta Aduaneira*), including the accompanying spare and accessory parts.
- vi. **Manufacturing and assembly industries (Chapter 2 on Specific Benefits, Articles 25 and 26):** Investments in the manufacturing sector benefit from an exemption from duties on the import of raw materials to be used in the industrial manufacturing process. This also applies for investments in the assembly of motor vehicles, electronic equipment, computer and communications technology and others, which benefit from a reduced payment of duties on the import of materials to be used in the industrial production process. These are granted to investments that assume an obligation to maintain an annual turnover of not less than MZN3,000,000 (approximately US\$100,000) and which have a final product added value of at least 20 per cent.

- vii. **Large dimension projects (Chapter 2 on Specific Benefits, Articles 36 to 38):** Authorized investments that exceed MZN12,500,000,000 (approximately US\$416 million), as well as investments in public infrastructure carried out under a government concession are entitled to benefit from an exemption from payment of customs duties and value-added tax on the importation of construction materials, machinery, equipment accompanying spare and accessory parts and other goods used in the carrying out the activity.

5.2.1 Other Incentives

- i. **Provision of goods or services below market value:** This includes access to government-owned natural resources and land at no charge. The Constitution establishes that the land is owned by the State and exploitation and use is regulated by Law 19/97. Investors can receive the right to use and harness the land (*direito de uso e aproveitamento da terra*, or DUAT) by following procedures foreseen in the Land Law. The law favours access to land for the implementation of projects of public interest at an affordable levy or user fee—the only required fee for land use—unless there is need to resettle people (compensation is only provided from the government to citizens for the value of structures, such as houses, farm buildings, and trees and crops).
- ii. **Capacity Building Programs:** FUNAE and the National Directorate for New and Renewable Energies have been promoting capacity-building programs (such as organizing training sessions, seminars and workshops) in order to promote renewable energy. Non-governmental organizations, as well as international organizations, also play a role in these activities directly supporting the activities of the Ministry of Energy. In 2008, FUNAE started capacity-building courses for installers of photovoltaic systems in the province of Maputo to improve the skills of institutions and individuals involved in installation of photovoltaic systems in the education, health and private sectors. The training ran for three days and included both theoretical and practical classes. The program was expanded in 2009 to Gaza, Inhambane, Sofala, Nampula and Cabo Delgado regions. In 2011, FUNAE organized training sessions for engineers from FUNAE, the health, education, and private sectors on biomass and photovoltaic technology. Training programs are an incentive for both internal and external investors, since one of the major barriers to the promotion of renewable energies is lack of trained manpower.

6.0 Discussion and Analysis

6.1 Stakeholder Assessment of Investment Incentives for Renewable Energy Projects

Based on the research conducted in this study—a full list of which is provided in the appendix of this report—the authors conclude that current investment incentives provide real opportunities for the private sector to develop renewable energy projects. However, due to the capital-intensive nature of renewable energy projects, it remains challenging to bring investments forward. The research suggests a number of insights.

Fiscal Incentives and the Role of the CPI, GAZEDA and IPEME

Interviewees said the most important investment incentives are fiscal incentives (such as tax breaks) provided through the Investments Promotion Centre (CPI) and the Office for Accelerated Development Zones (GAZEDA) mainly for large-scale projects. The creation of the CPI and the GAZEDA was crucial in providing support to businesses and to attract investments, including both foreign and national large-scale investment. Also, the establishment of the Institute for Promotion of Small and Medium Enterprises (IPEME) was deemed important for its support of smaller investors starting businesses.

Some stakeholders argued against centralizing responsibilities with a couple of agencies, although it seems that centralization is justified because the level of required activity warrants only one or two key agencies (at this stage) able to work across a range of sectors. Funding agencies for all sectors would be much costlier than having them clustered around a smaller number of sectors.

Biofuels Investors Are the Only Beneficiaries so far

The only renewable energy investment projects approved for special incentives are large-scale biofuel projects (involving substantial levels of investment) with the main aim of exporting the bulk of the biofuels produced to Europe and America. The ability of private biofuel companies to benefit from tax exemptions, such as reductions in IRPC and VAT, is subject to the regulations in force for specific areas defined as ZFI and ZEE.

In terms of the financial and economic performance of the biofuel projects, it is early to judge, as their project cycle is very long (starting with the development of bio-feedstock plantations and then moving to the industrial transformation of bio-feedstocks into biofuels). Most biofuel investments have started recently, after 2008, so their impact, positive or negative, is still being assessed.⁷

Developing Renewable Energy Supply Chains and Human Capital

Bringing modern energy services to rural communities could be backed by local industrial developments to support the sustainability of the sector. For example, one of the major constraints in rural electrification projects using direct current (DC) systems is the lack of DC lamps. Promoting the local production of lamps could address this issue. The Mozambique-based assembling unit of pico solar photovoltaic systems owned by Fosera Southern Africa Limitada shows local production can help solve the problem of the availability of spare parts. However, it needs to be recognized that Mozambique currently does not have a strong industrial base from which to set up local supply

⁷ Projects outside the borders of those areas benefit from general investments incentives foreseen in the TBC.

chains. While in the 1990s Mozambique had electronics assembling experience in producing radios, television sets and other electronic appliances, this experience was lost to a significant extent as a result of the internal conflict.

One key issue is the need to train people with both technical and managerial skills in order to start and run these types of projects and businesses. A good example, which could be replicated, is from the German development agency Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), which has been training people in the province of Manica to develop and manage micro hydro schemes.

Rural electrification objectives are not integrated into renewable energy and investment incentive policies

The concept of rural electrification appears in fiscal legislation; however, it is narrowly defined and only considers conventional electrification projects. Importantly, it doesn't include off-grid renewable electricity, which would be of major benefit to rural populations. It does not cover other energy services that are crucial to meeting the Millennium Development Goals (MDG) and the Sustainable Energy for All (SE4ALL) Initiative. The law considers only electrification projects undertaken by public entities and ignores the participation of the private sector in rural electrification activities.

Improve the transparency of the investment incentives application process

In terms of its content, the legislative framework is not yet sufficient to promote investment incentives for renewable energy investment projects. Currently, the Ministry of Energy is working on additional legislation, such as feed-in tariffs, in order to enable injection of renewable energy production into the grid. At the off-grid level, a study on tariff models is about to start that will provide a basis for legislation on this matter, as explained by the National Director of New and Renewable Energies, António Saíde, during an interview for this report. Most people interviewed recommended that a company's eligibility for receiving incentives should be based on clear criteria and not granted through special permission or certification by investment promotion other government agencies. As argued by Emilio Cipollini from the company Mocitaly, this approach would ensure prompt decision making and quick turnaround times for investors—essential to attracting and retaining investment. The Mozambique government is developing legislation in order to guarantee the transparency of the process with monitoring and evaluation instruments foreseen in proposed new legislation, as explained by the National Director of New and Renewable Energies.

Maintaining the affordability of electricity for rural populations

Incentives that promote rural electrification projects should recognize the need to maintain the affordability of electricity to the end user. An example is Law No. 3/2012 which provides a favorable VAT rate (calculated on only 40 per cent of the CIF value) for rural electrification projects with a component undertaken by a government agency. The problem with current legislation is that private companies are unable to benefit from these incentives unless they are participating in a project with a partially or fully owned government entity. According to representatives of organizations such as Fosera Southern Africa Limitada, the law should be reviewed in order to include private companies acting individually. Steven Dils from FOSERA said that the target of the law should be the end consumer and not the organization bringing the service.

6.2 The Impact of Investment Incentives

The use of investment incentives to promote investment involves certain costs, such as the loss of tax revenue through corporate income tax waivers. This report recommends that the Mozambique investment incentive framework support projects that deliver against stated policy objectives to create jobs and spur economic development. However, assessing the impact of investment incentives is complex given the range of factors that may need to be taken into account when measuring the costs and benefits of a particular policy instrument. Major factors attracting investments are good governance, political stability, modern infrastructure and skilled manpower. It is often difficult to judge whether an increase in investment in renewable energy is due to the general investment conditions or to specific investment incentives.

Analyzing the full impact of investment incentives on the deployment of renewable energy falls outside of the scope of the present work. A simplified approach to assessing the extent of their impact would be to ask investors to list and rank the reasons they have invested in Mozambique. If incentives were a key factor in swinging marginal investment decisions, investors would mention them as being a key factor influencing the decision and location to invest. According to the list of biofuels projects submitted to CPI from 2008 to 2012, incentives are very important to exporters (those that are also mobile), since export-oriented firms operate in highly competitive markets with slim profit margins. Investment incentives can make the difference as to whether or not to invest in a particular region or country.

6.3 Estimates of the Costs and Benefits of Renewable Energy Investment Incentives

There are no quantified financial costs associated with the use of investment incentives to promote renewable energy in Mozambique. According to the information presented in Section 4, the main type of renewable energy in Mozambique that appears to have benefited from investment incentives is biofuel. As indicated in Table 2 above, from 2008 until now, US\$1,154,810,540 of private capital has been invested in the sector. It is worth noting that the costs associated with using support mechanisms such as reduced tax rates (on most imported goods) is generally not well tracked or quantified in government budgets. In Mozambique's situation, this is no exception, with poor data on the financial cost of foregone revenue provided by incentives.

7.0 Conclusions and Recommendations

Conclusions

- So far there have been no renewable energy projects registered in any of the areas benefiting from regional investment incentives.
- Under the framework of investment laws, the Centre for Promotion of Investments (CPI) and the Office for Accelerated Development Zones (GAZEDA) are crucial for coordinating and helping attract investment opportunities.
- A substantial number of applications for investment incentives have been made to CPI confirming that private companies are trying to access available investment incentives. However, it is clear the system has failed to attract a diverse range of small-scale and medium-size projects incorporating a wide range of renewable energy technologies, given that biofuels have been the main renewable energy brought forward. More work is required to create a legislative environment that can attract investors for a wider range of renewable energy systems.
- The present legislation is oriented towards supporting large biofuel scale projects rather than renewable electricity projects (such as solar PV and wind power projects). Hydropower projects are an exception and are able to offer dispatchable electricity to local grids. However, as legislation supporting feed-in tariffs may be approved in the near future and an atlas of renewable energy resources is being developed by FUNAE, it is anticipated that investments in renewable energy other than biofuels will be submitted in the near future for consideration.

Recommendations

The research suggests the following recommendations:

- Regional incentives should be used to promote the deployment of renewable energy technologies. A specialized unit could be set up to undertake that task. Something similar to the Agrarian Development Fund (*Fundo de Desenvolvimento Agrário* or FDA) could be set up, run by the Ministry of Agriculture, that provides funding for private sector investments in the agricultural sector.
- Given the lack of data, the Mozambique government should begin measuring and publishing estimates on the costs of these instruments in order to foster a discussion and analysis of their effectiveness.
- A simple database containing investment opportunities for smaller renewable energy projects could be set up and disseminated to potential investors who could then apply for support from IPEME, or for funding which may be available at the Ministry of Energy or elsewhere. Also, applications for these projects to receive fiscal incentives, either through CPI or GAZEDA, could be prepared at a sectoral level by the Ministry of Energy or at the IPEME
- Independent power producers in rural areas developing a variety of renewable energy technologies need to be promoted. This could be achieved through the following:

- o During the revision of present legislation, such as the Tax Benefits Code, renewable energy matters should be correctly integrated into the policy. This view was supported by some companies, such as Mocitaly Lda and Fosera Southern Africa Limitada. Energy as a priority sector should be properly integrated into the statutes of the MPMEs. This means that investment incentives will not function properly until most legislation available on incentives is amended and properly regulated toward transparent implementation.
- o Rapid development zones and accelerated development zones (industrial free zones and special economic zones) could be mandatorily linked to one or several energy projects enjoying similar fiscal benefits (supported as if the project were located within the zone). This would secure a dedicated energy source to power the development of the area in order to lower energy input costs and the cost of goods (such a recommendation is supported by the Executive Director of GAZEDA, Danilo Nalá).

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Appendix: List of Organizations/People Interviewed

NAME OF PERSON	ORGANIZATION	CATEGORY
António Saíde	National Directorate of New and Renewable Energies	National Director
Alsácia Atanásio	National Research Fund	Executive Director
Gil Bires	Centre for Promotion of Investments (CPI)	Director
Emílio Ussene	Centre for Promotion of Investments (CPI)	Head of Department
Danilo Nalá	Office for Accelerated Development Zones (GAZEDA)	General Director
Sheila Ibraimo	Institute for Promotion of Small and Medium Enterprises (IPEME)	Head of Department
Miguel Diogo	Energy Fund (FUNAE)	Head of Division
Tom Smis	Belgian Technical Cooperation	Representative
Cláudio James	PETROMOC	Project Manager
Emilio Cipollini	Mocitaly, Lda	Manager
Steven Dils	Fosera Southern Africa Limitada	Director
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