



OCCASIONAL PAPER SERIES

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**PRE-ASSESSMENT REPORT  
OF THE MOZAMBICAN  
ENERGY SECTOR UNDER  
THE PRINCIPLES OF THE  
INTERNATIONAL ENERGY  
CHARTER AND THE  
ENERGY CHARTER TREATY**

ANUCÊNCIO BOUENE

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ENERGY CHARTER SECRETARIAT  
KNOWLEDGE CENTRE  
2016

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## Abbreviations

AfDB	- African Development Bank
ANEA	- Agência Nacional de Energia Atómica
APE	- Acordo de Parceria Económica
AU	- African Union
BIT	- Bilateral Investment Treaty
CBM	- Coal Bed Methane
CCGT	- Combined Cycle Gas Turbine
CNELEC	- Conselho Nacional de Eletricidade
CPLP	- Comunidade de Paise de Lingua Oficial Portuguesa
CTRG	- Central a Térmica de Ressano Garcia
DBA	- Double Taxation Agreements
DNER	- Direcção Nacional de Energias Renováveis
EC	- Energy Charter
ECT	- Energy Charter Treaty
EDM	- Electricidade de Moçambique
EITI	- Extractive Industries Transparency Initiative
EMEM	- Empresa Moçambicana de Exploração Mineira
ENH	- Empresa Nacional de Hidrocarbonetos
EPCC	- Exploration Production Concession Contract
EU	- European Union
FDI	- Foreign Direct Investment
FUNAE	- Fundo de Energia
Gj	- Gigajoules
GSA	- Gas Sales Agreement
GoM	- Government of Mozambique
ICO	- Islamic Cooperation Organization
IEC	- International Energy Charter
IMF	- International Monetary Fund
IEA	- International Energy Agency
INE	- Instituto Nacional de Estatística

INP - Instituto Nacional de Petróleo  
IPP - Independent Power Producer  
KTOE - Kiloton Oil Equivalent  
LNG - Liquefied Natural Gas  
LPG - Liquefied Petroleum Gas  
MW - MegaWatts  
MIREME - Ministério dos Recursos Minerais e Energia  
MIT - Multilateral Investment Treaty  
MDG - Millennium Development Goals  
MGC - Matola Gas Company  
MOTRACO - Mozambique Transmission Company  
MOPI - Intellectual Property International Organization  
NEPAD - New Partnership for Africa's Development  
PARPA - Plano de Acção para Redução da Pobreza Absoluta  
PDGN - Plano Director do Gas Natural  
PETROMOC - Petróleos de Moçambique  
PPA - Power Purchase Agreements  
PPP - Public-Private Partnership  
ROMPCO - Republic of Mozambique Pipeline Company  
SADC - Southern Africa Development Countries  
SAPP - Southern Africa Power Pool  
TCF - Trillion Cubic Feet  
UNCLOS - United Nations Convention on the Law of the Sea  
UNCTAD - United Nations Conference on Trade and Development  
WB - World Bank  
WTO - World Trade Organization

## Executive Summary<sup>1</sup>

The Energy Charter is an international organization that promotes the rule of law and regulatory stability for investment, trade, transit and efficiency in the energy sector across the world. As part of the objective to expand its principles and rules beyond its traditional borders, the Energy Charter has updated the 1991 European Energy Charter into the 2015 International Energy Charter in order to reflect some of the most topical energy challenges of the 21<sup>st</sup> century, such as the growing weight of developing and emerging countries for global energy security, the “trilemma” between energy security, economic development and environmental protection, the need to promote access to modern energy services, diversification of energy sources and routes, and regional integration of energy markets.

The International Energy Charter is in line with the EU and international policy agenda as reflected in the UN Sustainable Energy for All (UNSE4All) initiative, which mandates a 3-goal target of ensuring universal access, doubling the share of renewable energy and doubling the rate of improvement in energy efficiency by 2024. The European Union has allocated more than EUR €3 billion over the next 7 years (2014-2020) to promote sustainable energy in Sub-Saharan Africa. The importance of these efforts has been reinforced by the 2014 G7 and G20 meetings in Brussels and Brisbane, respectively, which highlighted the need to provide strategic assistance for sustainable socio-economic growth and financial rebalancing in developing and emerging countries.

In this context, the Energy Charter Secretariat, in collaboration with the European Commission, has developed a capacity building programme with African countries to introduce them to the universal market-based principles enshrined in the International Energy Charter and the Energy Charter Treaty and to assess their energy sectors against these universal principles. The objective is to promote an investment friendly regulatory environment that is necessary to address the huge energy challenges facing the African continent. The current report is the result of that capacity building programme, which for three months brings to the Secretariat in Brussels secondees from African governments.

This report provides an overview of the Mozambican energy sector. The report presents national reforms against the core principles embodied in the International Energy Charter and the Energy Charter Treaty: Security of supply and universal energy access, open and sustainable markets, national sovereignty, regional market integration, regulatory stability and predictability, research and technology transfer, and international cooperation. Accession to the International Energy Charter and the Energy Charter Treaty contribute to upgrade national energy policy and legal framework according to international standards, which improves trust and reliability in an increasingly global and interdependent energy

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<sup>1</sup> This Report was prepared by Anucêncio Bouene, senior economist at the Ministry of Mineral Resources and Energy of Mozambique, and supervised by Ernesto Bonafé, regulatory expert at the Energy Charter Secretariat. Comments were made by Crystal Svanikier and Zélio Amândio da Silva Guirruogo.

sector. The more countries subscribe to those principles, the more they will effectively set the standard for international energy relations.

## 1. Introduction

The Energy Charter Treaty is an internationally legally binding text providing clear and predictable rules in the areas of investments, trade and transit and energy efficiency, it provides dispute resolution mechanisms, while explicitly recognising and protecting national sovereignty over natural resources. The Energy Charter Treaty creates an environment in which international energy markets can function effectively, and thereby helping to create an internationally level playing field and promoting the rule of law in the energy sector. The Energy Charter Treaty was signed in 1994 and entered into force in 1998. It currently has been signed by, or acceded to, by 54 countries, including the European Union.

The political foundation of the Energy Charter Treaty was the European Energy Charter of 1991, a political declaration expressing the commitment of a signatory country to move towards an upgraded international legal system. The European Energy Charter is a political commitment by its members to encourage energy cooperation with the following objectives and principles: development of open and efficient energy markets, creation of conditions to stimulate the flow of investment into the energy sector and encourage the participation of private enterprise, non-discrimination among participants, respect for state sovereignty over natural resources, and recognition of the importance of environmentally sound and energy efficient policies. Up to now the European Energy Charter has been signed by sixty-four European, Asian, Australasia, North American and African states, as well as the European Union.

The Astana Declaration of November 2014 highlights the strategic objectives of the Energy Charter to expand the principles of the Energy Charter Treaty beyond its traditional borders by maximising on the increasing interest of new countries in different regions around the world. The adoption of the International Energy Charter in 2015 reflects the implementation of this objective.

Having Mozambique sign the International Energy Charter, and later the Energy Charter Treaty, sends a political signal to the international community that it shares a number of international energy principles on trade, investment, transit and energy efficiency. It upgrades its national energy sector according to international principles, which would raise its profile and help to attract foreign investment. The objective of this report is to present the Mozambican energy sector against the universal principles enshrined in the International Energy Charter and the Energy Charter Treaty and it concludes that the Mozambican energy objectives and structural reform match the principles of the International Energy Charter and therefore, should embrace it, and after that, the Energy Charter Treaty.

## 2. Country profile

### 2.1. Overview

According to 2007 estimates, Mozambique is a country with a population of around 25 million people<sup>2</sup> and has had an average economic growth of 7% for the last four years, well above the average economic growth for the Sub-Saharan African region of 5.5%. Since the devastating civil war which ended in 1992, the country has enjoyed a remarkable social and economic recovery and has managed to keep the average annual inflation rate below the double-digit range for the last ten years.

The 2014 Doing Business Report ranked Mozambique 139<sup>th</sup> out of 189 countries in the world, in 15<sup>th</sup> position out of the Sub-Saharan African countries surveyed, and 8<sup>th</sup> position in the investor protection ranking index. In the 2013 Index of Economic Freedom, Mozambique was placed 22 in the Sub-Saharan African region.

Mozambique's macroeconomic performance over the last fifteen years has been the result of the country's political stability and its adaptation of liberal market policies that have increased foreign direct investment within its economy. The need to further enhance economic growth relies heavily on the country's ability to develop its energy sector in a way that allows for further interaction with regional and global markets, utilizing all of Mozambique's diverse natural resources. This report reviews the important tools required for Mozambique to achieve these goals.

The Poverty Headcount Index fell by 15 percentage points between 1997 and 2008 (out of a total population of 25 million)<sup>3</sup>. Inequality remained relatively low by regional standards and progress has been made toward achieving the key Millennium Development Goals of reducing infant mortality and primary enrolment. Nevertheless, with an annual per capita income of US \$647<sup>4</sup> in 2014, 53.25% of the population still live below the poverty line.<sup>5</sup> Mozambique remains a poor country with considerable social and economic challenges; infrastructure deficits and services (energy, transport, water and sanitation, and the telecommunication industry) are still inadequate. In addition to this, there are serious unmet education and health needs.

Located strategically in southern Africa, Mozambique is member of several international and regional organizations, to promote international cooperation, investment, trade and development. For instance, the African Development Bank (AFDB), *the Comunidade dos*

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2 INE 2014.

3 INE 2014 The Mozambique population is 25 041 922 of people. [www.ine.gov.mz/](http://www.ine.gov.mz/).

4 INE 2014 (National Bureau Statistics).

5 In Mozambique the poverty line is 18,4 Metical, or around 60 US cents.

*Países de Língua Oficial Portuguesa* (CPLP),<sup>6</sup> the Commonwealth of Nations, International Centre for Settlement of Investment Dispute (ICSID), Islamic Development Bank (IDB), International Monetary Fund (IMF), International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), Southern African Development Community (SADC),<sup>7</sup> United Nations Educational, Scientific and Cultural (UNESCO), World Bank (WB), World Intellectual Property Organization (WIPO), World Trade Organization (WTO). Mozambique has a strategic relationship with European Union (EU), as the EU is the country's second most important economic partner, under the *Acordo de Parceria Económica* (APE), which also includes Botswana, Lesotho, Namibia and Swaziland. This agreement provides for duty-free and quota-free access to the EU market. Mozambique also benefits under the African Growth and Opportunity Act (AGOA) program, under which the American government allows African goods duty-free access to US markets. Mozambique has also adhered to the Extractive Industries Transparency Initiative (EITI) principles since 2012.

The urban and peri-urban areas are expected to grow at 4% annually. However, only around 40% of households have access to electricity, with over half of them located in Maputo and its surrounding areas. A large portion of the remainder is located in the provincial and municipal capitals. Most of these urban and peri-urban centres are connected to the main national electricity grid, which is owned and operated by the Mozambican power utility, *Electricidade de Moçambique* (EDM). Access to grid-based electrification in the rural areas is extremely low and due to low population densities and geographically dispersed loads, will continue to remain very low for the foreseeable future. Off-grid electrification schemes have – and continue to have – increased access to modern energy services. Looking forward, substantial and sustained investment is required to systematically increase access to electricity nationally. Such a national electricity access scale-up program needs to be anchored by a long-term national electrification strategy, as well as a medium-term cost rollout and investment program for both grid-based and off-grid projects.

## 2.2. National constitution

The Mozambican national constitution<sup>8</sup> establishes the basic principles of the Republic of Mozambique. It sets out the country's fundamental objectives, which include the defense of independence and sovereignty, consolidation of national unity, the promotion of balanced economic, social and regional development, the defense and promotion of human rights and the equality of citizens before the law. It also highlights the importance of the development

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<sup>6</sup> Includes all countries with Portuguese as its official language. Most of the countries are oil and gas producers: Angola, Brazil, Equatorial Guinea, Sao-Tome e Principe, Timor Leste and Portugal which is an EU and EC member State.

<sup>7</sup> The Southern African Development Community (SADC) comprises of more than 250 million people, and Mozambique is considered the gateway to the region.

<sup>8</sup> The recent constitutional reform in Mozambique was in 2004. The constitution was approved by the National Assembly on November 16 and published in official gazette - BR n.º51, Series I, on 22.12.2004 Wednesday. Entered into force on the day after the validation and proclamation of general elections of 2004, article 306.

of the economy and scientific and technological progress, and the establishment, and development, of relations of friendship and cooperation with other peoples and states.<sup>9</sup>

Under the national constitution, Mozambique has acceded to and observes the United Nation Organizations Charter and African Union Charter principles.<sup>10</sup> All international treaties and protocols ratified by the country remain in force under Mozambican legal framework. In terms of international solidarity, Mozambique actively participates in the international area to restore a fairer and more equitable economic both domestically and regionally.

In terms of economic rights, the Mozambican constitution recognizes and guarantees private property rights.<sup>11</sup> Expropriation is only carried out in rare cases of necessity, particularly in utility and public interest under the national laws, and will be carried out with right to fair compensation.<sup>12</sup>

The national constitution also emphasizes that natural resources within Mozambican territory (i.e. under ground, in the inter water, in the sea and in the economic free zone) are state property. The state makes inventories and values the natural resources before setting the terms and conditions for its use and establishes the framework under which benefits accrue to the state.<sup>13</sup> The Mozambican constitution highlights the public property and public domain of the activities related to natural resources and energy sector. This means that the rights are granted to a public enterprise or a private company through the concession – acquired through direct negotiation or public tender. The article 98 of the Constitution establish that the natural resources in the soil and sub-soil, interior waters, territorial sea, continental shelf and the Exclusive Economic Zone are property of the State. Moreover, constitutes public domain of the State: Maritime zone; air space; hydraulic potential; energy potential, streets and line railway roads; mineral deposits, and other referred by law. Notwithstanding, Mozambique is part of the United Nations Convention on the Law of the Sea (UNCLOS).<sup>14</sup>

The State promotes the foreign investment in the country. However, this should respect the national economic policy framework. This alien investment should occur in all country and all economic sectors excluding does reserved to the property or exclusive exploration by the State.<sup>15</sup>

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9 Article 11, National Constitution of Mozambique.

10 N. 2 article 17, of the constitution.

11 Article 82.

12 Ibid.

13 Article 102.

14 Ratification 10 December 1982 and ratification and Accession in 1997. See, [http://www.un.org/depts/los/convention\\_agreements/convention\\_overview\\_convention.htm](http://www.un.org/depts/los/convention_agreements/convention_overview_convention.htm), (last visited 26 August 2015).

15 Article 108.

Under the Constitution the land is State property. Consequently, in any given circumstance cannot be sold, alienate, transfer including mortgage or pledge.<sup>16</sup> Acquiring the concession right does not automatically gives the right to the land or in other words there is no direct overlap, for example, *“the attribution of the right of exploitation of oil and gas not presupposes the attribution of rights of use and enjoyment of land or other pre-existing rights, which belong to the state”*, as stated on n. 1 article 10 of the Petroleum Law n. 21/2014, of 18 August. Therefore such right remains with the State until the concessionary applies for the Land right - designated Right to use and enjoyment of the land (DUAT) which coincides with the period of the concession as well as extension.<sup>17</sup> Nevertheless, in Mozambique there is secure of tenure also conditions to build infrastructure for the project once a discovery is made or right granted. The existence of minerals and hydrocarbons and Mega-projects gets priority over other uses of the land unless a serious environmental concern and requires payment of fair compensation.<sup>18</sup>

The Constitution formulates a general and comprehensive environmental right.<sup>19</sup> All citizens must live in a balanced environmental and the State and stakeholders adopt policies to protect it as well as control the rational use of all natural resources.

### 3. Energy sector profile

#### 3.1. Institutional system and stakeholders

##### a) The Ministry of Mineral Resources and Energy (MIREME)

The Ministry of Mineral Resources and Energy (MIREME)<sup>20</sup> has been created by the Presidential Decree n. 1/2015, of 16 January, whilst the Presidential Decree n. 11/2015, of 16 March defines its attributions and competencies conjugate with the Organic Statute approved by the Resolution n. 14/2015, of 8 July by the Inter-Ministerial Commission of Public Administration.<sup>21</sup> The ministry is according to the principles, objectives and tasks set by the Government directs and monitors the implementation of Government policy in geological investigation, exploitation of mineral and energy resources, and the development

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16 Article 102.

17 For instance, n. 3 article 12 of the Mining Law n. 20/2014 of 18 August.

18 See article 20 of the Spatial Planning Law, Law n. 19/2007 of 18 July, conjugate with article 68 of the Decree n. 23/2008, Approves the Regulation of the Spatial Planning Act, as well as Decree n. 31/2012, of 8 August, Approves the regulations on the resettlement process resulting from economic activities. In addition article 30 of the Mining law and article 7 of the Petroleum Law.

19 Article 90.

20 See official website <http://www.mireme.gov.mz/>, (Last visited, 27 August 2015)

21 Conjugate with, paragraph g) of n. 1 of article 4 of the Presidential Decree n. 3/2015, of 20 February, and delegated competencies of the Cabinet Council under article 1 of the Resolution n. 7/2015, of April 20.

and expansion of the supply infrastructure electricity, natural gas and petroleum products, article 1 of the Presidential Decree n. 11/2015 and article 1 of the aforesaid Resolution.

The article 2 of both acts, specifies the attributions of the Ministry which are as follow:

- Elaboration of proposals and execution of Mineral Resources and Energy sector policies;
- Inventory and management of mineral and energy resources of the country;
- Promotion of a legal and institutional framework to develop the sector;
- Promotion and dissemination of the potential of mineral resources and energy sector;
- Promotion of technological development for sustainable utilization of mineral and energy resources at national level;
- Promotion of private sector participation in the development and use of the potential of mineral and energy resources and related infrastructure;
- Promotion and control of activity of prospecting and geological research and rational and sustainable use of mineral resources;
- Inspection and supervision of the sector's activities and monitoring the implementation of technical safety standards, hygiene and environmental protection;
- Promotion and control of oil production activities and the development of transport and logistics infrastructure;
- Promotion of the development of infrastructure supply of electricity;
- Promotion of increased access to electricity in their various forms, in order to stimulate growth and economic and social development of the country;
- Security of supply assurance and distribution of petroleum products nationwide, with particular emphasis on the expansion of the distribution network in rural areas;
- Promotion of the diversification of energy sources and energy efficiency with a view to security and energy stability;
- Promotion of the safe and peaceful use of atomic energy.

The Ministry holds six core competency areas: geology; mining; electricity; hydrocarbons and fuel; renewables. In general, all areas include activities, such as promotion, development and access to the population and investors, approval of research and investigation projects, sustainable exploration and exploitation, pricing policies, enable and update a national database, licensing projects as well as coordinate, control, supervise all activities and others.<sup>22</sup>

Therefore, all institutions related to the energy sector are overseen by the Minister including institutes, provincial directorates, state enterprises and regulators, as stated on the Resolution.

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<sup>22</sup> Article 3 of both acts mention above

The article 4 of the resolution points out the structure of the Ministry. The Ministry is composed by: Minister Cabinet, National Directorate of Mines and Geology, National Directorate of Hydrocarbons and Fuels, National Directorate of Energy, Directorate of Planning and Cooperation, Juridical Cabinet, Inspector General of Mineral and Energy Resources. Moreover, several departments Human Resources, Finance and Administration, Acquisitions, Communication and image.

Furthermore, the articles 5 and 6 indicate the subordinate and overseen Institutions, respectively:

**i. Subordinate institutions:**

- Energy Fund (FUNAE)
- Technical Unit for the Implementation of Hydroelectric Projects
- Center for Gemology and Lapidary
- National Geology Museum

**ii. Overseen Institutions:**

- CNELEC - National Council of Electricity
- INP - National Petroleum Institute
- ANEA - National Agency for Atomic Energy
- National Institute for Mines
- Geologic Institute of Mines
- EDM,EP - Electricity of Mozambique
- HCB,SA - Hydroelectric of Cahora Bassa
- Petromoc, SA - Petroleum of Mozambique, S.A.
- EMEM, SA - Mozambique Mining Exploration Enterprise, S.A.
- ENH, EP – National Hydrocarbons Enterprise, E.P.

## **b) Electricidade de Moçambique – EDM**

*Electricidade de Moçambique* (EDM)<sup>23</sup> is a vertically-integrated government-owned power company with an installed capacity of 140MW in hydropower generation (86 MW operational) and an installed capacity of 109 MW (82 MW operational) in thermal power stations. EDM buys most of its power supply (400 MW) from *Hidroeléctrica de Cahora Bassa* (HCB)<sup>24</sup>, which owns and operates the *Cahora Bassa* plant on the Zambezi (2,075 MW). The Government of Mozambique owns 92.5% percent of HCB, which operates as an Independent

<sup>23</sup> See official website, <http://www.edm.co.mz/>, (Last visited, 27 August 2015).

<sup>24</sup> In November 2012, the Government of Mozambique completed the historic buy-back of the Cahora Bassa Hydroelectric Power Generation Facility, acquiring an additional 7.5% stake. More see official website <http://www.hcb.co.mz/>, (Last visited 27 August 2015).

Power Producer (IPP). The bulk of the electricity generated at HCB is exported to South Africa, with a small amount sent to Zimbabwe. EDM sells any excess electricity on the Southern Africa short-term energy market. The national transmission grid is currently interconnected with South Africa, Zimbabwe and Swaziland.

### c) The Fundo Nacional de Energia

The Energy Fund - *Fundo Nacional de Energia (FUNAE)*<sup>25</sup> is an energy fund created by the Decree n. 24/97 with a mission to promote more energy access in a sustainable and rational manner. It aims to finance and provide financial guarantees for energy projects that contribute to the development, production and productive use of alternative energy sources in rural areas. Since its establishment, FUNAE has been able to implement numerous successful projects using solar, wind and biomass energy resources and technologies. It has also been successful in bringing modern energy services (e.g. water pumping, crop grinding, communications, etc.) to schools, clinics and communities. FUNAE has four offices in Sofala, Zambezia, Tete and Nampula.

### d) The Conselho Nacional de Electricidade

The National Electricity Council,<sup>26</sup> *Conselho Nacional de Electricidade (CNELEC)*, was established as an independent advisory regulatory body for the power sector in 2008. In early 2009, the Government of Mozambique approved the allocation of 2.5% of concession fees from *Hidroelectrica de Cahora-Bassa* to the advisory body, in addition to a 25% share of any other electricity sector concession fees to fund CNELEC's operating budget.

CNELEC was established under the Electricity Law and it functions as a legal entity with both administrative and financial autonomy. Its aim is to serve as a consultative body as well as a conciliation, mediation and arbitration authority for disputes between different concessionaires, as well as between concessionaires and consumers.

Currently, there is no independent regulator for the energy sector in Mozambique. The regulation and the supervision of the electricity sector is assigned to the Ministry of Energy through the Electrical Energy National Directorate. The CNELEC is under reform to become a regulatory authority, not only to the electricity sector, but to the entire energy sector (including the fuel and natural gas).

Similarly, the renewable energy sector is also dependent on the Ministry of Energy through the Renewable Energy National Directorate (*Direcção Nacional de Energias Renováveis - "DNER"*). The government is now in the process of endorsing CNELEC as the national

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25 See official website, <http://www.funae.co.mz/>, (Last visited, 27 August 2015).

26 See official website, <http://www.cnelec.org.mz/>, (Last visited, 27 August 2015).

regulatory authority. However, the relevant authority and responsibilities of the regulator have not yet been defined. Project documents are currently entered into between the concessionaire and the relevant authority (ME, Council of Ministers and Provincial Governors).

There is also the National Agency for Atomic Energy (ANEA), a public law entity that is responsible for managing protection against radioactive hazards and ensuring the environmental safety and protection against ionizing exposition and radiation.<sup>27</sup>

### **e) ENH – Empresa Nacional de Hidrocarbonetos, EP**

The *Empresa Nacional de Hidrocarbonetos* (ENH,EP)<sup>28</sup> or National Hydrocarbon Enterprise is the National Oil Company of Mozambique which is the national entity responsible for participating in the exploration and production, commercialization of petroleum and exclusively represents the State. It was established by the Decree n. 39/97 of 12 November. The company must participate in any project related to exploration and production of petroleum.<sup>29</sup> It carry's out projects in joint ventures, or through its subsidiaries, such as, CMH,<sup>30</sup> ENH Logistics,<sup>31</sup> ROMPCO,<sup>32</sup> MGC,<sup>33</sup> ENH-Kogas.<sup>34</sup> Recently, constituted a joint venture with Korean Gas<sup>35</sup> designated ENH-Kogas to downstream activities, distribution of gas in the capital city of Maputo.<sup>36</sup>

### **f) Empresa Moçambicana de Exploração Mineira, SA – EMEM**

The EMEM or Mozambique Mining Exploration Enterprise is the Government enterprise created to participate in mining projects in Mozambique. It was established by the Decree n. 29/2009 of June, and with regards to energy will participate in coal projects and gas methane representing the Government in such projects. For example, in the Mining Concession Agreement for Moatize Mines (Minas de Moatize) signed in 3 April of 2013 EMEM will receive 5% carried interest through exploration and production phase, although not inserted

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27 In 2006, Mozambique adhered to the International Atomic Energy as result of the recognition of the importance of the nuclear energy application in the economic and social impact area, namely healthy, mining, environmental, agricultural and animal production.

28 See official website, <http://www.enh.co.mz/>, (Last visited, 27 August 2015).

29 Article 24 of the Petroleum Law.

30 See official website, <http://www.cmh.co.mz/>, (Last visited, 27 August 2015).

31 See official website, <http://www.enhlogistics.co.mz/sobreNos.html>, (Last visited 27 August 2015).

32 See official website, <http://www.rompco.co.za/content/overview>, last visited 27 August 2015.

33 See official website, <http://www.mgc.co.mz/>, last visited 27 August 2015

34 See <http://www.enh.co.mz/Quem-Somos/Grupo-ENH/Companhia-Mocambicana-de-Gasoduto-S.A>, last visited 27 August 2015

35 A company from South Korea see official website <http://eng.kogas-tech.co.kr/eng/index.do>

36 See, ENH website <http://www.enh.co.mz/Imprensa/Noticias/Inicio-de-obra-de-construcao-do-Projeto-de-distribuicao-de-gas>, (Last visited, 27 August 2015).

in the mining law.<sup>37</sup> Recently, the company assigned a memorandum of understanding with ENH, and NU Africa for the development of the project of methane gas exploration associated with coal (CBM) for the production of energy in Tete Province.<sup>38</sup>

### **g) Local communities**

The local communities play an important role in the acquisition of the social license to operate if the project will or affects them. Mozambique laws refers that before exploration a process of public information must be done.<sup>39</sup> However, they have no right to say no but to be informed about the project and how that affects their livelihood and propose solutions. The GoM creates mechanisms to local communities in or around the project area participate in such projects for instance in possible jobs, training and benefit from social responsibility activities to alleviate poverty.<sup>40</sup> In certain cases, of a temporary or permanent resettlement a memorandum of understanding should be signed between the Local communities, the investor and the Government.<sup>41</sup>

### **h) Civil society**

The civil society advocate for an environment protection and responsible exploration and exploitation of the natural resources.<sup>42</sup> For example, with respect for the environment, contribution of natural resources to local, provincial and national development, transparency and access to information. Mozambique laws and the Government recognize the importance of Civil society organizations supporting and elevating the standards of the Sector. In Mozambique, to implement the EITI principles a Steering Committee headed by the Ministry of Mineral Resources and Energy was established. The composition of this committee follows a tripartite configuration that includes government, extractive industry companies and civil society.<sup>43</sup> To facilitate the dialogue and their involvement these non-profit institutions created the Civil Society Platform on Natural Resources and Extraction Industries (PSCM). Also they must be consulted in legal reforms.

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37 The agreement has been published in the Ministry website, see [http://www.mireme.gov.mz/index.php?option=com\\_phocadownload&view=category&id=11:contratos-mineiros&Itemid=150](http://www.mireme.gov.mz/index.php?option=com_phocadownload&view=category&id=11:contratos-mineiros&Itemid=150) (Last Visited, 27 August 2015) . See paragraph a) of the clause 16.1).

38 See the Ministry website [http://www.mireme.gov.mz/index.php?option=com\\_content&view=article&id=29:enh-emem-e-nuafrica-selam-parceria&catid=9:comunicados&Itemid=101](http://www.mireme.gov.mz/index.php?option=com_content&view=article&id=29:enh-emem-e-nuafrica-selam-parceria&catid=9:comunicados&Itemid=101)

39 See for example, article 11 Petroleum Law and article 32 of the Mining Law.

40 Ibid.

41 See for example, n. 3 article 7 of the Petroleum Law and n. 2 article 32 of the Mining Law.

42 N. 2 Article 90 of the constitution.

43 See EITI Mozambique website, <http://www.itie.org.mz/index.php/sobre-nos/comite-de-coordenacao>

### **i) Domestic companies**

In Mozambique the most expressive domestic companies organization is the *Confederação das Associações Económicas de Moçambique* (CTA) or The Confederation of Economic Associations of Mozambique<sup>44</sup> advocates for the participation of domestic companies in Oil and Gas and Energy projects. The GoM creates mechanisms for the participation of domestic companies in the energy sector projects and mega-projects, and is inserted in the Laws and Policies of Mozambique.<sup>45</sup> This organization represents the private sector of the country and a forum for discussion with the Government. In this context, domestic companies or in partnership with foreign companies should be given priority in the procurement of goods and services, supply, equipment, construction to the LNG projects areas 1 and 4, as stipulated in the n. 1 article 10 Decree-Law n. 2/2014, of 2 December.<sup>46</sup>

## **3.2. National energy mix**

Mozambique has a considerable amount of energy resource potential. The development of the country's hydro, natural gas, coal, biomass and renewable resources can put the country in a favourable position to respond, not only to internal demand, but also regional and international demand as well. The energy mix in Mozambique is dominated by hydropower, and it has long been an important part of the Mozambique power system because of the large-scale of potential development and its low average cost of electricity generated, lower than any other technology, renewable or otherwise.

### **a) Hydropower**

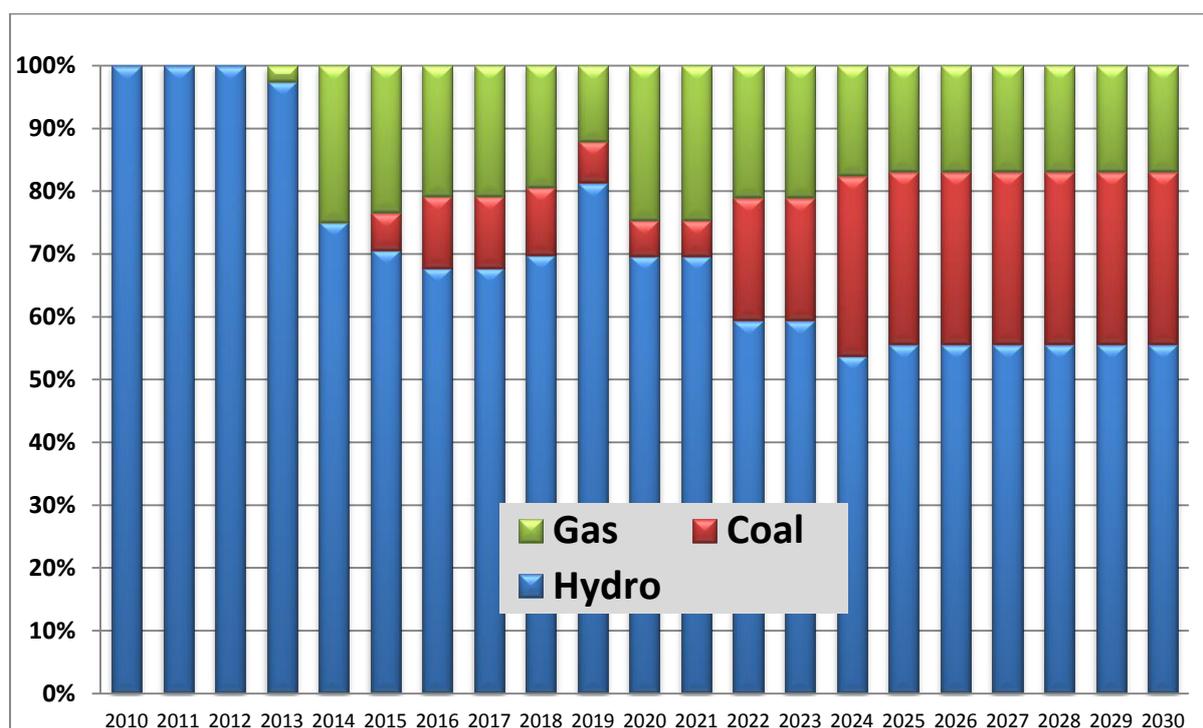
Mozambique is one of the largest producers of hydropower in Africa, and most of its production comes from one important hydro plant Cahora Bassa (run by HCB) that has an installed capacity of 2075 MW. There are other, smaller hydro plants, with combined total installed capacity of 225 MW. These include Mavuzi (50 MW), Chicamba (40MW), Coruma (16.6 MW) and Massingir (28 MW). Mozambique's total installed hydro capacity is around 2300 MW, and the country relies on it for a significant share of the total power generated – around 99% (Refer to Table 1). This excludes new upcoming large power projects.

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44 See official website <http://www.cta.org.mz/>, (Last visited, 27 August 2015).

45 See Article 107 of the constitution, article 34 of the Mining Law, article 13 of the Petroleum Law. See for example, PPP law, National Development Policy 2015 - 2035, Energy Strategy 2009 and others.

46 Decree Law n. 2/2014, of 2 December, Decree establishing the special legal and contractual regime applicable to Liquefied Natural Gas Project in Areas 1 and 4 of the Rovuma Basin.

**Table 1: Mozambican energy mix (Forecast)**

Source: Ministry of Energy 2013

## b) Natural gas

Mozambique will become Africa's second largest natural gas exporter, after Nigeria, when natural gas production is set to increase to 230 billion cubic metres in 2040. In addition to this, Mozambique will contribute 26% of the gas supplies to the region by 2040<sup>47</sup> when Pande and Temane (3,59 TCF) and Bacia do Rovuma (191 TCF) both come on stream. There is 800 km of gas pipeline infrastructure from Temane to South Africa (Secunda), and there is also an internal gas distribution network for domestic and industrial use that has an annual capacity of 3 million of GJ. However, there are gas-to-power central stations, such as Temane (80Mw) located in the North of Mozambique (Inhambane province). Central Termoelétrica de Ressano Garcia (CTRG) is located in Ressano Garcia, south of Mozambique and next to the South Africa border. CTRG is a gas fired power plant with an installed capacity of 175 MW and operates on natural gas from Temane gas field. This plant exports peak-electricity to South Africa. These new important plants are changing the energy mix in Mozambique and increasing the amount of gas being used to develop the domestic and region power sector.

47 International Energy Agency (2014) Africa Energy Outlook: A focus on energy Prospects in Sub-Saharan Africa (IEA Publications; France).

### c) Mineral coal

Mozambique is envisaged as a country with great potential in the production and export of coal, with potential reserves of more than 25 billion tons of mineral coal, including coque coal and thermic coal. Most of this is located in the Tete, Manica and Niassa provinces. Since 2011, international investors have planned to construct a coal-fired power plant, not only to provide electricity for its mining operations, but also to reinforce the energy supply sent to the national and regional grid. More coal-fired station projects are planned from 2015, which include Moatize (300 MW), Benga (300 MW), Nkondezi (650 MW) and Jindal-Nhantsanga (660 MW). In spite of all this, coal does not currently represent any share in the power generation in Mozambique.

### d) Renewable energy

Mozambique has enormous potential in renewable energy, which include solar, wind, biomass and geothermic resources. This potential was confirmed by the Renewable Energy Atlas, which stated that Mozambique had a potential of 23,026 GW of energy. In addition to this, there are a number of on-going mini hydro and solar projects central to the plan of maximizing the benefits from the country's renewable resources.

### e) Solar

Solar plays an important role in the energy mix in Mozambique. There is approximately 5 kWh/m<sup>2</sup>/day average solar radiation which contributes for use in different technologies like PV systems and thermic solar systems for water heating. There are some projects to increase electricity access in remote areas of all provinces by providing schools, clinics and households with PV systems.

There is also a solar station (*Central Fotovoltaico de Muembe*) in a remote area in North of Mozambique with an installed capacity of 400 kW and provides electricity to a small number (approximately 350) private and public institutions and homes.

### f) Biomass

Mozambique has around 2 GW of biomass potential. There are around 17 million hectares of forest and most of this area is located in the Zambezi, Sofala and Niassa provinces. Biomass meets around 80% of the energy needs in Mozambique, and it includes resources from wood, *bagaco* from the sugar industry and industrial waste. However, firewood is still the most used biomass resource for domestic needs in the rural and semi-urban areas.

### g) Wind

There is 6 to 8 m/s wind potential, which can only produce electricity on a small to medium scale. The total potential is around 4.5 GW, with an immediate potential connection of around 230 MW. Gaza and Maputo are locations of the optimal wind resource, where average wind speeds are approximately 7m/s.

### h) Geothermic and oceanic

Geothermic and oceanic energy are also part of the renewable energy mix, with a small available potential of 200 MW.

For easy reference, please refer to Table 2, which presents the change in Mozambique's energy production and exports by energy source between 2000 and 2011.

**Table 2: Mozambique Energy Production and Exports (2000-2011)**

KTOE	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Production</b>												
<b>(Net)</b>	<b>7253</b>	<b>7535</b>	<b>7740</b>	<b>7713</b>	<b>9161</b>	<b>10362</b>	<b>10937</b>	<b>11332</b>	<b>11781</b>	<b>11910</b>	<b>12440</b>	<b>12786</b>
Biomass	6418	6512	6645	6772	6907	7045	7186	7398	7631	7816	8005	8199
Electricity	834	1022	1093	938	1007	1142	1265	1381	1300	1497	1432	1417
Natural Gas	1	1	2	3	1214	2116	2414	2476	2772	2551	2967	3126
Oil	0	0	0	0	33	59	72	77	78	46	36	44
<b>Import</b>	<b>658</b>	<b>921</b>	<b>798</b>	<b>1167</b>	<b>1307</b>	<b>1207</b>	<b>1295</b>	<b>1352</b>	<b>1307</b>	<b>1350</b>	<b>1489</b>	<b>1684</b>
Electricity	112	335	335	523	680	694	728	737	706	717	734	737
Oil	546	586	463	644	627	513	567	615	601	633	755	947
<b>Export</b>	<b>670</b>	<b>814</b>	<b>870</b>	<b>698</b>	<b>1965</b>	<b>2954</b>	<b>3320</b>	<b>3462</b>	<b>3724</b>	<b>3529</b>	<b>3876</b>	<b>4009</b>
Electricity	670	814	870	698	778	899	980	1062	964	1092	1038	1028
Natural Gas	0	0	0	0	1187	2055	2340	2400	2760	2437	2838	2981
Oil	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

**Source: Energy Statistics 2012, Ministry of Mineral Resources and Energy**

Under Mozambique's current energy strategy, access to, and the development of, a diversified range of energy sources is seen as critical to the sustainable use of those resources in terms of energy security, environmental protection and market efficiency.

In terms of fuel products, Mozambique does not yet produce oil or fuel products, except for condensates from natural gas. As a result, all other fuel products have to be imported. In

2011, Mozambique imported about 920,000 tons<sup>48</sup> of petroleum products (see the Table 3) against 535,000 tons in 2000, representing an increase of 73% and an average increase of 6% per year. Fuel price subsidies have stimulated domestic fuel consumption and its increase during this period. The transport sector is also responsible for the vast majority of fuel consumption, followed closely by industrial activities.

**Table 3: Mozambique Energy Access Rate (2005-2014)**

Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Energy Access Rate (%)	7								39	40
Consumer of NEG (Million)	1,5	1,7	1,8	2,1	2,9	3,5	4	5,7	6,3	6,5
Isolated System (Million)	0,1	0,3	0,4	2,4	2,7	2,8	2,9	2,9	3,5	3,7
Total (Million)	1,6	2	2,2	4,5	5,6	6,3	6,9	8,6	9,8	10,2

**Source: Ministry of Energy, 2014**

In terms of natural gas, the SASOL/ ENH consortium have been producing condensates from gas extracted from the Pande/ Temane field since 2004 and all condensed production is exported.

In terms of LPG, Mozambique imports it from South Africa, having imported 15,000 tons of LPG in 2011, against 7,700 tons in 2000. This represents an increase of almost 94%. The limited capacity for storage has contributed to stagnation in the markets over the last seven years.

#### 4. National energy strategy

*The 2015 International Energy Charter explicitly recognises the sovereignty of each state over its energy resources and its right to regulate energy transmission and transportation within its own territory, respecting all relevant international obligations. In the spirit of political and economic cooperation, signatories agree to promote the development of efficient, stable and transparent energy markets at regional and global levels, taking into account environmental concerns and the role of energy in each country's national development. To this end, signatories agree to take coordinated action to achieve greater coherence of energy policies, which should be based on the principle of non-discrimination and on market-oriented price formation.*

<sup>48</sup> Conversion factor, including os ktoe

#### 4.1. The National Energy Strategy (2014-2023)

Mozambique's Energy Strategy<sup>49</sup> was designed for a ten-year period (2014-2023) and it provides a vision and path to respond to the challenges and opportunities in the power sector. The main goals are to reinforce Mozambique's position as an important regional energy producer, to support social development and poverty alleviation, and to promote general economic growth.

The mission under this strategy is to further diversify the mix of energy forms used, and contribute to industrial and socio-economic development. Hence, under the strategy, the Government of Mozambique will continue building institutional capacity in the sector to ensure the efficient promotion and regulation of the sector, which is needed to complete current infrastructural projects and enhance Mozambique's role within the SADC region.

In addition to this, the new energy strategy has taken the new natural resource discoveries – such as the natural gas at the Bacia do Rovuma (North of Mozambique) and the mineral coal of the Tete (Centre of Mozambique) into account, increasing Mozambique's energy sources used for power generation, and which will change the Mozambique energy matrix in the medium and long term.

This strategy is oriented along five important themes:

- i) Production and transportation of electricity,
- ii) Production and required infrastructure for fuel,
- iii) Distribution and electricity access and fuel,
- iv) Funding and pricing, and
- v) Capacity building at the Ministry of Energy, which aims to increase the Ministry's ability to respond to identified opportunities and challenges in the sector.

In terms of the challenge of universal access, the goal is to ensure universal access by using the country's diverse energy resources, i.e. hydro, fuel and natural gas.

Even though Mozambique has rapidly increased energy access over the past decade, only 40% of the population currently have access to modern forms of energy, which is divided into 26.4% connected to the national grid electrification and 14% in off grid (which include the PV systems in remote areas and gas-to-power). All district headquarters are fully electrified. Energy access rates have increased from 7% in 2005 to 14% in 2014. The average consumption in Mozambique was around 200 kWh per capita per year in 2013, being much lower when compared to neighbouring Zambia, Botswana and Zimbabwe (all above 500 kWh per capita per year).<sup>50</sup>

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49 To be approved by the GoM

50 International Energy Agency (2014) Africa Energy Outlook: A focus on energy Prospects in Sub-Saharan Africa (IEA Publications; France).

The use of solar energy as an option to deal with increasing energy demand in public services (e.g. schools, health centres, buildings, including the staff homes) is a viable option for increasing energy access in remote areas. It is estimated that around 4 million people have been given access to power via this option over the last ten years. In around 201 villages, more than 669 schools and 623 clinics, including 77 buildings were covered by the PV systems project in Mozambique.<sup>51</sup> Equally, more than 30,000 people in remote areas have benefited from 56 water pump systems, irrigation units and the domestic uses that come from the PV systems, resulting in improvements in living conditions.

The success of the project has made it economically feasible to produce solar panels in Mozambique, an important achievement that further reduces the cost of using solar energy and allows for its increased use in the country's energy mix.

Mozambique has ambitious and progressive expansion plans for its energy industry, particularly in the urban and peri-urban areas, in which the government has expressed its desire to increase energy access to 50% of the population by 2023. The Government of Mozambique also plans to launch a transmission and distribution grid rehabilitation program for the entire national territory to increase energy quality and efficiency in urban areas. There are also plans to further strengthen the institutional capacity of FUNAE to increase its role in the process of rural electrification.

In addition to this, Mozambique plans to ensure there is at least one petrol station in each of the 128 districts around the country and to promote the use of natural vehicular gas (NVG) for private and public transportation. To fulfil this goal, the government is taking action to create licensing legislation for NVG stations, as well as providing financial incentives to encourage vehicle conversion and hybrid vehicle purchase. This will reduce the country's dependence in oil imports, an important part of Mozambique's import cost.

The Government of Mozambique also plans to promote the installation of 400 MW of renewable energy systems, which will include 200 MW of mini and medium hydropower stations, 150 MW of wind energy, 50 MW of solar PV systems, and 50MW of biomass energy.

The Government of Mozambique also plans to do the following:

(i) *Regulation* – Establishment of an energy authority as the regulator for the entire energy sector, which will include liquid fuel, natural gas (downstream) and renewable energy.

(ii) *Energy efficiency* – To promote habits of reasonable and responsible consumption of energy and to create a legal framework that guarantees these behaviours both in the efficient production and consumption of energy.

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<sup>51</sup> Ministry of minerals Resources and Energy 2014.

(iii) *Feed-in Tariff* – To be approved by the government, the tariff for renewable energy is for projects in which the generation cost is equivalent to the contract cost of natural gas power stations, with an extra incentive on the bidding process and an environmental tax. Special attention will be made so that there are no increases to the EDM operational and maintenance costs, which need to be retained.

(iv) *The new tariff methodology settlement* – Due to the large-scale energy projects in Mozambique, the investments made are significant. Therefore, tariff methodology settlement is an important tool used to help ‘bail out’ the investor in this sector, especially in operations on the local market. The new tariff needs to take the operation and maintenance cost into account.

(v) *Rural and Peri-Urban Electrification* – The main challenges are extending grid access, improving the quality of the energy, and improving the capacity of the administrative posts to promote the productive use of energy and to generate more income. The goal is to mobilize USD\$ 200 million every year over the next seven years to expand and improve energy access in the rural and peri-urban areas, achieving 44% universal access by 2021.

The government is also looking to mobilize USD\$ 350 million to improve the quality of energy in Maputo. Mozambique’s capital has benefited from a new gas power plant (with a capacity of 175 MW), which has contributed to a large reduction in the energy supply shortfall and improvements in the quality of energy supplied. Maputo is registering an unprecedented increase in energy infrastructure to support its rising energy demand.

The increase in income levels of Mozambicans located mainly in the centre of the main cities of Maputo, Beira, and Nampula, is raising consumer demand with the use of new domestic equipment (such as laundry machines and air conditioners), which use a lot of energy. As a result, the per capita energy consumption of Mozambique has increased significantly.

**Table 4: Mozambique Energy Strategies and Policies**

Policy or Strategy	Main Objectives
<p><b>Energy Policy</b> approved by the Resolution n. 5/98 of 3 March, the Council of Ministers</p>	<ol style="list-style-type: none"> <li>1. Promoting economically viable investment programs for the development of energy resources (hydropower, forests, coal and natural gas);</li> <li>2. To ensure the reliable supply of energy at the lowest possible cost in order to meet the current levels of consumption and the needs of economic development;</li> <li>3. Increase the availability of energy for the household sector, particularly coal, kerosene, gas and electricity;</li> </ol>
<p><b>Renewable Energy Development Policy</b> approved by the Resolution of the Council of Ministers n.</p>	<ol style="list-style-type: none"> <li>1. To promote the technological development of subsector of new and renewable energies;</li> <li>2. Promote the use of new energy sources and renewable;</li> <li>3. To promote the provision of new energy services and renewable quality at affordable prices, particularly in rural areas</li> </ol>

62/2009 of 14 October	
<p><b>Biofuel Policy and Strategy.</b> Approved by the Council of Ministers, through Resolution n. 22/2009 of 24 March</p>	<p>This policy defines the policy guidelines and most relevant measures in the area of biofuels, identifying the mechanisms to implement it consistently, in order to respond to the priorities of the Government in combating poverty and promoting energy security.</p>
<p><b>Energy Strategy</b></p> <p>Approved by the Resolution n. 9/2009 of 10 March, the Council of Ministers</p>	<ol style="list-style-type: none"> <li>1. Ensure the availability of energy at the national level to meet the challenges of sustainable socio- economic development of Mozambique;</li> </ol>
	<ol style="list-style-type: none"> <li>2. The diversification of energy sources;</li> <li>3. Encouraging the sustainable production of biofuels based on local energy resources to substitution of imported fuels;</li> <li>4. Adoption of tariff schemes to reflect actual costs, including the mitigation of environmental effects adverse;</li> <li>5. Encouraging the business and financial sector invest in research and development of new products and technologies;</li> <li>6. The efficient use of energy;</li> <li>7. The institutional coordination and consultation with all stakeholders;</li> <li>8. Participation in international cooperation incidence in the SADC region, as well as the exploitation of the regional market for the viability of large enterprises energy and take advantage of economies of scale provided by the energy coordination regional;</li> </ol>
<p><b>Strategy for Natural Gas Market Development in Mozambique.</b></p> <p>This strategy was approved by Resolution of the Council of Ministers No. 64/2009 of 2 November</p>	<p>Based on the Discoveries of Pande and Temanee (3.57TCF):</p> <ol style="list-style-type: none"> <li>1. Use of royalty gas 5% to development projects to projects with great impact in the country development;</li> <li>2. Through regulation ensure reasonable gas prices to final consumers;</li> <li>3. Aiming new gas discoveries, Government institutions should continue to do research on the gas value chain projects and does discoveries are public domain;</li> <li>4. Promotion of domestic companies in the gas industry</li> </ol>

<b>Environmental Management Strategy for Energy Sector - 2008 – 2012</b>	<ol style="list-style-type: none"> <li>1. The joint planning and integration of energy initiatives with development plans and programs of other sectors;</li> <li>2. Tariffs reflecting real costs and the incorporation of mitigation measures to protect the environment;</li> <li>3. The promotion of the concept of the productive use of energy and enlarging the approach to energy supply to include the supply of systems and tools;</li> <li>4. Institutional coordination and consultation with relevant stakeholders for better development of the energy sector;</li> </ol>
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**Table 5: Electricity Expansion Master Plans**

Master Plan	Main Objectives
<b>EDM - Electricity Master Plan 2004 (2005 – 2019) Currently under revision</b>	<ol style="list-style-type: none"> <li>1. Focus on extension and rehabilitation of grid supply and constitute a Least Cost Investment Plan (LCIP) for the power sub-sector in Mozambique;</li> <li>2. Facilitate mobilization of capital to power sector projects;</li> <li>3. Connect all capital province and districts to the main grid (produce a rural electrification master plan) using hydropower capacity;</li> </ol>
<b>Draft Master Plan of Electricity updated for the period 2012-2027<sup>52</sup></b>	<ol style="list-style-type: none"> <li>1. to maximize the gains for investments in rehabilitation, strengthening and expansion of the electricity grid to ensure greater reliability in electrical system,</li> <li>2. to produce the development plan of the electrical system in Mozambique, coordinating the generation, transmission, distribution and expansion, ensuring that its investment will be part of a structured plan for long term investments,</li> <li>3. To ensure a realistic plan for reducing losses.</li> </ol>
<b>EDM - Rural Electrification Plan</b>	<ol style="list-style-type: none"> <li>1. To achieve the goals 28 projects where designed to be implemented within the period 2005 – 2019;</li> <li>2. Use of national fix tariff;</li> <li>3. Use of cross subsidy to maintain the rural areas where there is no profits;</li> <li>4. Use of pre-paid meters to stimulate the low income consumers;</li> <li>5. Investment of around 70 MUS\$ per year in rural electrification ( 65% from de donor source and 35% from EDM)</li> </ol>

<sup>52</sup> See EDM website

[http://www.edm.co.mz/index.php?option=com\\_content&view=article&id=379%3Aapresentadodraftdoplanodirectorelectricidade20122027&catid=53%3Anoticias&Itemid=78&lang=en](http://www.edm.co.mz/index.php?option=com_content&view=article&id=379%3Aapresentadodraftdoplanodirectorelectricidade20122027&catid=53%3Anoticias&Itemid=78&lang=en)

## 4.2. The Mozambique Gas Master Plan (Plano Director do Gas Natural – PDGN)

On 24 June 2014, the GoM approved *Plano Director do Gas Natural*, or The Mozambique Gas Master Plan. The Mozambique Gas Master Plan was created in the context of new discoveries of Natural Gas in the *Offshore Rovuma Basin* with proven reserves around 127,9 TCF (and 148,1 TCF not discovered with total prospects of 276,5 TCF).<sup>53</sup> This potential required a plan to ensure that this non-renewable resource is used in a sustainable manner contributing to national development. Basically, ensure that part of the gas is used to industrialize the country, allowing viability and competitiveness of many industries. In other words, the gas should promote add value to the economy – from upstream, midstream and downstream. The plan coordinates activities based on the development of the gas including: estimates of demand and supply of the gas; infrastructures and projects based on the production, transport, refining and use of the gas – industry, pipelines, all value of chain; regulatory change; and a plan to implement anchor projects.<sup>54</sup> This plan is integrated in the general policies and strategies of the GoM – contribute to poverty alleviation and national development. The plan is to be a dynamic instrument and adapted over time. In this section we will present some aspect related to: regulatory issues, value of chain, and proposed projects.

With regards to regulatory issues. The GoM plans to introduce a new gas pricing policy - gas price of auction for 20 years. The auction will be based on: total volume over 20years; bid price; price review conditions.<sup>55</sup> The final consumer price will be added transportation costs through pipelines. Therefore, the GoM will do efforts to negotiate a domestic obligation of 20% of the total production.<sup>56</sup> The gas will be bought by a national entity and sold to the projects and others. Overall, the GoM should ensure that the gas prices are minimum to promote industry in frontier areas. The MIREME and INP should propose legislation to the pipeline and LNG sector. Whereas, the INP will be responsible for receiving and approve the construction of transmission (or high pressure) pipelines as well as approve tariffs based on fair and reasonable. In addition, receive proposals to build LNG facilities. The MIREME will be responsible for approving tariffs in distribution pipelines. In both cases tariffs should be formulated on the basis of fair and reasonable. Moreover, the legislation should respect the principles of: regulatory clarity, transparency, access to all potential users of gas network system.<sup>57</sup> Overall, consistent with the principles of the IEC and EC to promote the development of efficient, stable and transparent energy Markets.

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53 See PDGN page 9.

54 See PDGN page 10, 20 – 33.

55 See PDGN page 40 and 41.

56 Ibid.

57 See page 34-36, 40-41.

**Table 6: Natural Gas Value of Chain**

<b>Gas use/Industry</b>	<b>Gas Purpose/Projects</b>
<b>Gas for Exportation</b>	LNG Pipelines
<b>Cross Country Gas Distribution</b>	3000km Pipeline - backbone from north to south) Small pipelines to develop local industries
<b>Electricity</b>	Relevant for all sectors of the society. Produce and supply electricity for domestic, industrial use, public transport (Metro).
<b>Industrial sector including small and medium enterprises and residential including refining. Allows industries in all areas across the country.</b>	GTLs – Gas to Liquids; Produce fertilizers (urea); Methanol; Commercial, large and small quantities for heating, dry, cooking (restaurants, hospitals); residential use (heating, coking, petrochemical); Aluminum, Iron, Steel; Transport (Public transport, vehicles).

**Source: Adapted from the Mozambique Gas Master Plan page 22-23**

**Table 7: Projects proposed to the INP and ENH by prospect investor based on the gas (Investor from EC member States)**

<b>Project</b>	<b>Country – Investor Origin</b>	<b>Place of the Project</b>	<b>Gas Quantities</b>		<b>Duration (years)</b>
			<b>TCF</b>	<b>MGJ</b>	
GTL	Italy	Palma	1.00	1053	25
GTL	South Africa	Palma	0.40	400	25
Fertilizers	Germany	Palma	0.60	680	20
Fertilizers	Norway	Palma	0.70	737	25

Fertilizers	Japan	Palma	0.20	247	20
Methanol	Japan	Palma	0.70	737	20
Methanol	Germany	Palma	13	13684	25
Processing Tomato	United Kingdom	Chokwe	-	13	25

**Source: Adapted the from Mozambique Gas Master Plan page 24**

### 4.3. Transversal Policies

#### a) The Action Plan for the Reduction of Absolute Poverty (PARPA II, 2006 – 2009)

The Action Plan for the Reduction of Absolute Poverty, 2006-2009 (PARPA II) or *Plano de Acção para Redução da Pobreza* was approved by the Government of Mozambique on 02 of May of 2006, and aims to achieve the objective of reduce the incidence of poverty from 54% in 2003 to 45% in 2009. Represents the materialization of several instruments, such as Millennium Development Goals, The New Partnership for Africa's Development (NEPAD) and Southern African Development Community (SADC). Therefore, included in government policies, laws and regulation, and energy in particular. With regards to energy and environment: the use of natural resources should benefit the most poor's<sup>58</sup>; rural electrification is a priority to the Government to alleviate poverty.

#### b) The National Development Strategy 2015 – 2035

The promotion, expansion and diversification of the industrial sector of the country is one of the key priorities of this strategy which the use of natural resources and energy play relevant role. For example, the development of several industrial parks across many regions of the country. The great challenge particularly coal, gas, is its transformation at national level, adding value in terms of export substitution policy of primary products for export approach finished products. Therefore, the main objectives are: (i) the vertical operation of the production of minerals, ensuring their transformation into finished products serve the domestic and international markets; (ii) the establishment of partnerships between domestic and foreign companies in the exploitation of resources; (iii) the employment of Mozambican companies providing services; (iv) State intervention in PPP in the provision of public goods and services; (v) the employment of individuals and financiers of large and small businesses through the Stock Exchange.<sup>59</sup>

<sup>58</sup> See PARPA paragraph 202.

<sup>59</sup> See National Development Strategy 2015-2035 page 37-38.

#### 4.4. Ongoing projects

As a result of the new law governing public-private partnerships, large-scale ventures and business concessions, according to Law n. 15/2011, Mozambique has significant energy investments in the generation and transmission areas of its power sector. These investments are all part of Mozambique's power sector development strategy and will bring new dynamics to the sector. It increases the ease of doing business in Mozambique and reduces the shortfall in the energy supply domestically and regionally. Based on the Energy Master Plan for Generation,<sup>60</sup> Mozambique has significant gas and coal resource potential, which will bring more competitiveness to the energy market.

##### a) Hydro power

- The Backbone Transmission Line (Tete region). The centre of hydropower generation in Mozambique is located in the Zambeze Valley, where a set of "mega-projects" are currently under development (i.e. Mphanda Nkuwa, Cahora Bassa North, Lurio, Moatize, Benga and Ressano Garcia). These "mega-projects", totaling more than USD \$15 billion in mostly private investment, will provide the necessary power through this transmission project to the south of Mozambique, with the main load going to Maputo. This project will enable the development of hydropower and thermal generation projects in the Zambeze Valley and other upcoming projects, ensuring the transportation of power to the country's main consumer centres and creating business opportunities by providing reliable and affordable access to power.
- In terms of generation projects, the following are ongoing projects in the hydropower sector: Mavuzi, (60 MW), Mphanda Nkukwa (1500 MW), Cahora Bassa Norte (850 MW), Lupata (650 MW), and Boroma (160 MW). All these projects are located in the centre of Mozambique.

The combination of the different generation and transmission 'mega projects' under construction will ensure sustainable low-cost power generation in the country, encourage foreign direct investment in Mozambique, enhance regional integration through electricity trade, help finance the expansion of rural electrification and, *inter alia*, strengthen the country's balance of payments.

##### b) Thermal power projects

- Moamba Gas Plant. This power plant operates on gas from the Temane gas fields in the northern part of Inhambane province. The gas will be transported via an existing

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<sup>60</sup> Ministry of Energy, Generation Master Plan for the Mozambican Power Sector- Final Report- Volume I Main Report. July 2009

pipeline from Temane to Ressano Garcia. The location of the power plant requires the construction of a 50 km branch pipeline from Ressano Garcia to Moamba. The planned installed capacity is 500 MW but the initial installed capacity will be 140 MW.

- Kuvaninga Gas Plant. The planned location is in Chokwe (South of Mozambique) and will have an installed capacity of 55 MW. The plant has been presented as a base load plant and will be operation operating from 2015 onwards.
- Moatize Coal Plant. This coal-fired power plant is to be located on the north bank of the Zambezi, near Tete, in Northern Mozambique. It is a mine mouth power plant, based on the utilization of thermal coal, which is a by-product of mining and can be also exported as cooking coal. The project is planned to have an installed capacity of 2400 MW but will be commissioned with an initial capacity of 300 MW. The project will be completed in 2015. The plant is under the management of a Brazilian company, Vale Mozambique, which is currently implementing the first steps for the project.
- Thermal Electric Coal Station of Benga. It has an initial installed capacity of 500 MW but the total generation capacity will reach 2000 MW, which will be concluded from 2015 onwards. Benga will use lower quality coal since higher quality coking coal are reserved for export purposes.

### c) Natural gas

Mozambique plans to make an investment decision on the construction of a multi-billion dollar gas liquefaction facility in northern Mozambique, which has already been concessioned to Anadarko, ENI and the state-owned company, *Empresa Nacional de Hidrocarbonetos* (ENH).<sup>61</sup> Operation is planned to commence in 2018. It will reduce the import of LNG in Mozambique and will maximize the benefit from the gas, not only through the revenue from sales (exports), but also as a factor for the industrial development of Mozambique.

In the next fifteen years, Mozambique and Tanzania will be among the main natural gas suppliers in Sub-Saharan Africa, sharing around 44% of the 170 thousand million cubic metric gas production in the region.<sup>62</sup>

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61 Anadarko and ENI are multinational corporations from the USA and Italy, respectively, which have invested more than USD\$ 3billion in their oil and gas exploration project off the northern coast of Mozambique. The project began in 2006.

62 International Energy Agency (2014) Africa Energy Outlook: A focus on energy Prospects in Sub-Saharan Africa (IEA Publications; France).

The revenues generated from those resources presents an opportunity for Mozambique to increase investment in energy generation, in the supply of clean water, and in other basic public issues like sanitation, transportation, education and public health. The project will also increase the LNG storage capacity from 1100 to 6000 TM for domestic uses.

Natural gas distribution in Maputo City and Marracuene (South of Maputo) is being expanded to create opportunities for the development of the gas market for industrial, transportation, trade and domestic uses. This project will also provide new employment opportunities, stimulate micro and small entrepreneurs and promote sustainable development. It is planned to operate from 2014 onwards.

#### **d) Renewable energy**

In 2009 the Government of Mozambique approved the Policy for the Development of New and Renewable Energies, establishing it as one of the strategic priorities for the evaluation of new and renewable energies. Within the scope of the assessment of resources, the Policy, and subsequent Strategy for the Development of New and Renewable Energies, was approved in 2011 and established specific measures to be developed in terms of mapping hydro, wind, solar, biomass, geothermal and wave potential, as well as the identification and mapping of potential sites for the exploitation of these resources.<sup>63</sup>

#### **e) Solar**

Construction of the PV station in Mavago, Mecula, Niassa and Cabo Delgado will benefit around 29,500 consumers through electrification of 2,401 houses and 10 primary schools.

#### **f) Wind**

The wind conditions in Mozambique are most favourable along the coastline in the southern part of Mozambique to the border with South Africa. Dedicated wind measurement equipment was installed at two selected locations – at Ponta d'Ouro and one east of Inhambane-Tofinho. The identified wind resources correspond to annual generation of 2-2.5 GWh per MW installed wind power capacity.

#### **g) Biomass**

For all this potential (hydro, coal, natural gas) in Mozambique, the country remains under great pressure over the large use of biomass resources. Most of the people in Mozambique depend on this resource for a number of reasons, which include among others cultural use, low income, and lack of conventional energy access reasons. However, several programs

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<sup>63</sup> <http://www.atlasrenovaveis.co.mz/en/conteudo/renewable-energy-atlas-mozambique>. FUNAE 2011.

have been adopted aimed at encouraging the efficient use of this resource. These programs include the promotion of the enhanced production, technology and sustainable use of vegetal coal and firewood, thus reducing deforestation.

## 5. Energy legal framework

*The 2015 International Energy Charter encourages its members to participate in joint efforts aimed at facilitating and promoting market-oriented reforms and the modernisation of energy sectors in each member country. The signatories recognise the importance of entrepreneurs working within a transparent and equitable legal framework through the harmonisation of rules, regulations and standards in the energy sector. Signatories further acknowledge that the formulation of stable and transparent legal frameworks is necessary to create the conditions required for the development of energy resources for sustainable development, and they recognise the need to formulate legislation wherever this has not yet been done.*

The discovery of Mozambique's substantial mineral resource potential places the country in the unique position for investment in the energy sector, which is necessary to support the country's economic growth, sustainable development and the improvement of living conditions for millions of Mozambicans. However, this favourable environment for investment creates new challenges for the country, especially with regards to how investments in the energy sector can be made in an economically, socially and environmentally sustainable way whilst bringing the most benefit to the country.

At present, the biggest challenge Mozambique has been dealing with is legislative reform, especially in respect to investment and the energy sector to ensure that the country receives the most benefit from the exploitation of its natural resources. It is very important to the Government of Mozambique that the exploration and exploitation of its natural resources be undertaken in compliance with its sustainable socio-economic and environmental development strategy.

The region is currently facing a severe energy shortfall. This is the result of the rapid increase of the region's energy demand from extensive new construction projects, new energy intensive industries (including the mining sector), and the increase of income per capita. In order to address this issue, it is crucial that the national legislation and policy be structured to facilitate the necessary investment to the sector.

Mozambique's main energy legislation is the **Electricity Law No 21/97** of October 1997. This is the basic regulatory instrument for the generation, transmission, distribution and sale of electrical energy in Mozambique. It also covers electricity import and export, as well as regulates the concession regime of such activities. Under this law, the state, its agencies and other public entities have a determinant role in promoting the development of

Mozambique's energy potential to increase access to the benefits of electricity, as well as to contribute to the economic and social development of the country.

The state guarantees the participation of the private sector in the public service of electricity supply through concessions that guarantee the right to use and benefit from energy resources, while protecting the public interest. As a general rule, the governmental authorities with powers to approve power projects vary according to the installed capacity of the facility, as follows:

<u>Authority to Approve Power Project</u>	<u>Capacity Level of Project</u>
Council of Ministers	=> >100 MW
Ministry of Energy	=> Between 1 MW and 100 MW
Provincial Governors	=> <1 MW

The National Electricity Council (CNELEC) was also established under this law. CNELEC is administratively and financially autonomous and serves as a forum for consultation and as a safeguard for public interest. It also conducts public hearings on relevant matters, and mediates and arbitrates disputes in the sector between the concessionaires and the consumers.

Furthermore, the Electricity Law requires the national power transmission grid and the corresponding dispatch centre to be operated and managed by a public entity. Accordingly, by way of **Decree No 43/2005**, of 29 November 2005, state-owned *Electricidade de Moçambique* EDM was entrusted with the role of managing the national power transmission grid and the corresponding dispatch centre. Despite this, EDM has been required to adopt such an organizational structure as to separate the responsibilities of grid manager from its generation, transmission, distribution and trading activities, i.e. the first step towards unbundling.

Another energy legislation is the **liquid fuel legislation Decree n. 46/2012**, of 28 December, which regulates the import, export, transit, supply, storage, transport, distribution and sales activities of the fuel products, including the setting of tariffs. This law also accommodates the possibility of national biofuel production, as well as crude oil and condensed natural gas processing. This law aims to increase processing efficiency and to enhance the economic benefits in the import and distribution activities, making the fuel price more flexible and giving more incentives to participate in distribution systems in the country. Under this law, investors require a license for production, storage, loading terminals, oil pipelines, distribution and sales.

The **Oil Law No 21/2014**, of 18 August and adjusts the oil sector legal framework to the country's changing economic structure, where the Government of Mozambique is keen to promote new development in the oil sector and to ensure the sector's competitiveness, transparency, as well as safeguard the public interest, as mandated under the national constitution. This law establishes the regime for granting rights for oil operation activities in Mozambique. The state is responsible for activities related to hydrocarbon exploration, research, production, transport, sales and processing, including the petrochemical activities and liquefied natural gas (LNG). The state mandates that part of the oil products produced are allocated to national development. The government also guarantees to financially support the public company ENH to invest in enhancing and protecting its share holdings in the various hydrocarbon licenses.

**Table 8: Other laws in the Energy Sector**

Law	Main Objective
<b>Decree n. 8/2000, of 20 April</b>	Approves the Regulation establishing the competencies and procedures for attribution, control and extinguishing of concessions production, transport, distribution and commercialization of electric power, as well as their import and export.
<b>Decree n. 42/2005, of 29 November</b>	Approves the Regulation laying down detailed rules concerning the planning, financing, construction, possession, maintenance and operation of production facilities, Transportation, Distribution and electric energy trading, as well as the rules and procedures for the management, operation and overall development of National Network for electric Energy Transport.
<b>Decree n. 44/2005, of 29 November</b>	Approves the Regulation of Distribution and Commercialization of Natural Gas.
<b>Decree n. 9/2003, of 23 June</b>	Approves Electricity Tariff System of EDM
<b>Decree n. 1/2010</b>	Introduces in the Electricity tariff system (Decree n. 9/2003) the agricultural tariff in medium voltage to the Irrigation System for food production
<b>Ministry diploma n. 210/2012, of 12 September</b>	Regulation for Determining Maximum Prices of Natural Gas Sales
<b>Law n. 25/2014, of 23 September</b>	Legislative Authorization Law referring to liquefied Natural Gas projects of the Areas 1 and 4 of the Rovuma Basin.

<b>Decree-Law n. 2/2014 of 25 November</b>	Decree establishing the special legal and contractual arrangements applicable to the Liquefied Natural Gas Project in Areas 1 and 4 of the Rovuma Basin.
<b>Law n. 22/ 2014 of 18 August</b>	Mining Law

## 6. Security of supply and universal access

*The **2015 International Energy Charter** recognises the importance of energy security, a concept that embraces the needs of energy producing, transit and consuming countries, as well as access to modern energy services that is based on environmentally sound, socially acceptable and economically viable policies. In order to achieve energy security, IEC signatories affirm the importance of freedom of movement of energy products and of developing an efficient international energy infrastructure in order to facilitate the development of stable and transparent trade in energy. In addition to this, signatories to the IEC highlight the importance of diverse energy sources and supply routes to enhance energy security.*

Energy security is defined by the International Energy Charter from the viewpoint of producing, transit and consuming countries and also, universal access to modern systems of energy. Depending on the status of the countries, energy security may imply several of those dimensions.

Taking into account the evolution of the structure of the energy matrix in Mozambique as well as the projects discussed in previous sections, the assessment on energy security in Mozambique under the definition of the International Energy Charter is promising. Mozambique is heading towards a direction in which, if all projects (5000 MW) in generation of current and power transmission are operating at maximum capacity, can be self sustainable to meet the growing demand not only domestically but also meet the regional demand as well.

The geographic location of the country places Mozambique in a strategic position for energy resource transit from abroad to the hinterland countries like Zimbabwe, Malawi, Botswana and Lesotho. Currently, there is an oil pipeline connecting the Beira Port to Zimbabwe, which extends approximately 400 Km. In addition to this, under the Energy Protocol of the Southern Africa Development Countries, Mozambique is part of a regional market for the sale of electricity, which puts the country subject to accommodate the transit of electricity between countries of the SADC region.

Energy security in Mozambique is also associated to policies of energy efficiency that Mozambique has put in place, including the creation of a coherent legal framework with the production and use of energy resources in a rational and responsible way.

The use of technology or modern energy systems has been implemented in the new and renewable energy program in Mozambique. Installing PV systems in schools, hospitals, public buildings in remote areas, and the use of sustainable biomass resources are the result of renewable energy programs in Mozambique.

Several programs have been adopted encouraging the efficient use of renewable energy sources. These programs include the promotion of the enhanced production, technology and sustainable use of vegetal coal and firewood, thus reducing deforestation.

In this context, Mozambique has been adopting measures of policies and strategic programs of production and the efficient use of electricity, creating conditions for national energy security as well as regional energy security, taking advantage of these trade gains.

In terms of the challenge of universal access, the goal is to ensure universal access by using the country's diverse energy resources (i.e. hydro, fuel and natural gas).

Even though Mozambique has rapidly increased energy access over the past decade, only 40% of the population currently have access to modern forms of energy, which is divided into 26.4 connected in national grid electrification and 14% in off grid (which include the PV Systems in remote areas and gas-to-power). The table 2 below illustrates how energy access rates increased from 7% in 2005 to 14% in 2014. The average consumption per capita in Mozambique was around 200 kWh per capita per year in 2013 being much lower when compared to neighbouring Zambia, Botswana and Zimbabwe (all above 500kWh per capita per year).<sup>64</sup>

**Table 9: Mozambique Energy Access Rate (2005-2014)**

Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Energy Access Rate (%)	7								39	40
Consumer of NEG (Million)	1,5	1,7	1,8	2,1	2,9	3,5	4	5,7	6,3	6,5
Isolated System (Million)	0,1	0,3	0,4	2,4	2,7	2,8	2,9	2,9	3,5	3,7
Total (Million)	1,6	2	2,2	4,5	5,6	6,3	6,9	8,6	9,8	10,2

**Source: Ministry of Mineral Resources and Energy, 2014**

The use of solar energy as option to deal with increasing energy demand in the public services, i.e. schools, health centres, buildings and housing, is a viable option for increasing energy access in remote areas. It is estimated that around 4 million people have been given access to power via this option over the last ten years. Around 201 villages, more than 669 schools and 623 clinics, including 77 buildings were covered by the PV Systems project in Mozambique.<sup>65</sup> Equally, more than 30,000 people in remote areas have benefited from 56 water pump systems, irrigation units and the domestic uses from the PV systems, resulting in improvements in living conditions.

The success of the project has made it economically feasible to produce solar panels in Mozambique, an important achievement that further reduces the cost of using solar energy and allows for its increased use in the country's energy mix.

Mozambique has ambitious and progressive expansion plans for its energy industry, particularly in the urban and semi-urban areas, where the government has expressed its desire to achieve energy access to 50% of the population by 2023. The Government of Mozambique also plans to launch a transmission and distribution grid rehabilitation program for the entire national territory to increase energy quality and efficiency in the urban areas. There are also plans to further strengthen the institutional capacity of FUNAE<sup>66</sup> to increase its role in the process of rural electrification.

In addition to this, Mozambique plans to ensure at least one petrol station in each of the 128 districts around the country and to promote the use of natural vehicular gas (NVG) for private and public transportation. To fulfil this goal, the government is taking actions to create licensing legislation for NVG stations, as well as providing financial incentives to encourage vehicle conversion and hybrid vehicle purchase. This will reduce the country dependence on oil imports, an important part of Mozambique's import cost.

Among the current projects there is the promotion of a installation of 400MW of renewable energy systems, which include 200 MW in mini and medium hydropower's, 150 MW in wind, 50 MW at solar PV systems and 50 MW in biomass.

## 7. Sustainable energy

*The 2015 International Energy Charter recognises the importance of renewable energy sources and energy efficiency. Signatories to the IEC acknowledge the importance of efficient systems in the production, conversion, transport, distribution and use of energy for energy security, poverty alleviation, sustainable development and for the protection of the environment. They also agree to promote a more sustainable energy mix to minimise the*

65 Ministry of Mineral Resources and Energy 2014

66 FUNAE is an energy fund created by the Decree 24/97, with the mission to promote energy access at sustainable, affordable and rational manner. It aims to finance and provide the financial guaranty for the energy projects which contribute to the development, production and productive use of alternative energy.

*negative environment consequences in a cost-effective manner by sharing best practices on clean energy development and investment.*

Mozambique has undertaken various programs and policies to promote energy efficiency in the country. The focus on natural gas and renewable energy are strong attempts at reducing greenhouse gases and protecting the environment. The new energy strategy also defines mechanisms to fund renewable energy, including carbon credits that constitute an additional source of revenue for development projects in this field. Some programs in this area support the effort undertaken in the energy sector in Mozambique, with particular emphasis on the development of the natural gas program, the introduction of energy-saving lamps program, and the solar thermal system program.

The establishment of a legal and regulatory framework that focuses on activities specific to energy efficiency – such as Ban Incandescent Lamps regulation and regulating of water heating systems – is necessary for the Government of Mozambique to begin to move towards a more sustainable energy market.

Besides that, EDM conducted a study that identified a number of priority programs of energy efficiency, which can contribute to creating a sustainable energy market. They include the promotion of energy-saving lamps (CFLs, LEDs, etc.) for domestic consumers, hourly pricing schemes, the management of large consumer demand, use of split meters and solar thermal systems, as well as power factor improvements, and dissemination and awareness programs.

At the same time, there is a private initiative called Business Forum For the Environment (FEMA), where experiences are shared on energy efficiency measures in the context of resource efficiency and cleaner production. FEMA's mission is to promote dialogue between the government and the private sector, with the aim of jointly ensuring competitive industrial production based on the transfer and development of environmentally sound technologies.

Practices such as the deployment of solar heating systems to heat water, replacing conventional light bulbs with energy-saving lamps (UN 2050 initiative) and the implementation of light sensors are ongoing and are being adopted by several private companies in various sectors.

The adoption of feed-in-tariffs and other incentives is being considered by the Government of Mozambique to create a more sustainable energy market and to be able to attract more investors to the renewable energy production sector and change the energy mix in the country. The PV development in Mozambique is largely focused on off-grid applications

given the low energy prices for on-grid customers, including a relatively stable supply service.<sup>67</sup>

With only about 26% of the population electrified on on-grid systems and in view of the large density of the country, the government is procuring a large portion of the imported PV equipment through its rural electrification agency (FUNAE) and from the PV module production line recently built. As a result, the country's experience with renewable energy besides hydro is still limited to pilot projects.

## 8. Open energy markets

*Under the **2015 International Energy Charter**, open markets refers to the liberalisation of the energy sector, and signatories agree to participate in joint efforts to facilitate and promote market-oriented reforms and modernisation of the energy sector. The signatories also agree to promote open and competitive markets for energy products, materials, equipment and services, as well as remove barriers to energy trade in a manner that is consistent with the provisions of the WTO Agreement and other international obligations. It is important to note that under the IEC, liberalisation is not an obligation, but a principle that countries are encouraged to develop according to their national sovereignty and national strategy.*

Within the context of the International Energy Charter, open markets imply having a competitive market for energy products, materials, equipment and services. It also includes the transparent access to energy resources, removal of barriers, promoting the development and interconnection of energy transport, promoting access to capital, and facilitating the transit of the energy.

Since 1990, the national constitution of Mozambique establishes a market economy and the principle that private initiatives should be promoted to the economic development of Mozambique. The economic and social reforms that have been implemented since 1987, after the accession of Mozambique to the Bretton Woods institutions, brought profound changes in the economic landscape of the country, with privatization programs and legal framework reform. The Investment Law<sup>68</sup> 3/1993 arose as a result of these changes.

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67 PV Magazine (2013) Special Report Africa: Tanzania and Mozambique: [www.pv-magazine.com/news/details/beitrag/special-report-africa--tanzania--mozambique\\_100013524/#ixzz3LaTyyFx7](http://www.pv-magazine.com/news/details/beitrag/special-report-africa--tanzania--mozambique_100013524/#ixzz3LaTyyFx7) (last visited Monday 26th January, 2015).

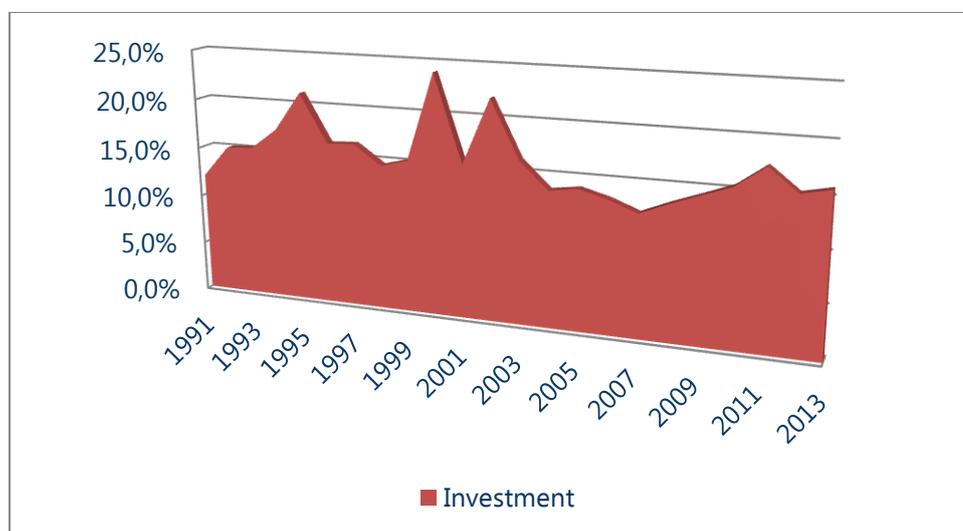
68 The first investment law in Mozambique was approved in 1984, Law n. 8/84.

The investment law has come to embody the need of the country to attract more investment, to be open for private investors, and to set a basic and uniform legal framework for the process of conducting national and foreign investments. Under this law, foreign investors enjoy the same rights, duties and obligations as nationals. The guarantees and incentives are also part of the provision for investors, and establish the protection of property rights, the transfer of funds abroad (profits, royalties, amortization and other funds), as well as the possibility of mediation and conflict resolution among investors using international mediation or arbitration conventions.

The Investment Promotion Centre (CPI)<sup>69</sup> was established in 1993 to promote investment for the country by attracting and retaining substantial direct domestic and foreign investment to boost economic growth and wealth creation, including the promotion of public-private partnerships for economic and infrastructure development.

For the past nine years, investment in Mozambique has grown annually on average by 12% points (Graph 1). Investment in Mozambique grows more than the GDP rate in Mozambique (7.5%), meaning that investment in Mozambique has the highest weight on economic growth than any other variable that make up the GDP.

**Graph 1: Investment in Mozambique (1991-2013)**



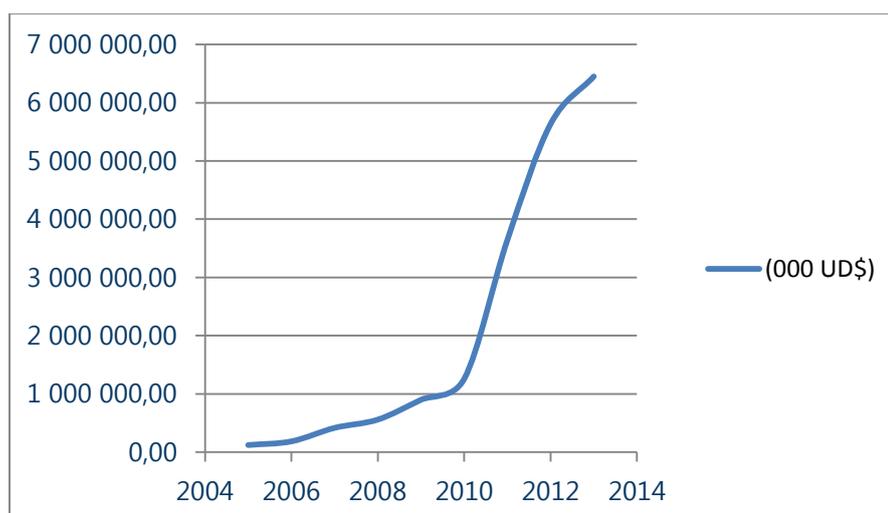
**Source: INE (2014)**

Mozambique has also been the final destination of a large volume of foreign capital, with greater focus on the energy and mining sectors. The volume of FDI has evolved considerably over the past nine years (Graph 2) as a result of this market opening.

<sup>69</sup> Centro de Promoção de Investimentos: [www.cpi.co.mz/index.php/PT/about-us/vision-and-mission](http://www.cpi.co.mz/index.php/PT/about-us/vision-and-mission) (last visited Monday, 26th January, 2015).

Graph 2 shows how the FDI level has evolved in the last 10 years, from just over USD\$ 122 million in 2004 to about USD\$ 7 billion in 2013. Most of this investment goes to the extractive industry sector and is linked to coal in the coal basin in Tete and the exploration of natural gas and oil in the Rovuma basin.

**Graph 2: Foreign Direct Investment net inflow (2005-2013)**



Source: World Bank, 2014.<sup>70</sup>

Besides this, Mozambique has been taking steps to reduce barriers to investment and improve the business environment in the country, which has resulted in encouraging progress. An important improvement in the last two years is the country's position in the environment index, which is currently placed 139 out of 189 countries in the world. Recent reforms have occurred in the energy sector and cross-border trade respectively, namely providing the single window system that links all relevant government agencies making it easy to trade across borders and reducing the financial burden of security deposits for new electricity connections.

As an Extractive Industry Transparency Initiative (EITI) member, Mozambique has complied with the principles and provisions of the initiative in terms of transparent access to mineral resources. By way of example, the new oil law provides that the state shall evaluate the existing mineral potential and promote access to oil resources through public tenders for granting the research, production and oil and gas exploration to allow access to the benefits of production and contribute to the economic development of the country.

<sup>70</sup> World Bank data: <http://search.worldbank.org/data?qterm=fdi+mozambique&language=&format=> (last visited Monday, 26th January, 2015).

Although the energy sector is fully liberalised, there are only a few number of private companies operating in the generation power sector. The main companies are *Central Termica de Ressano Garcia* (CTGR)<sup>71</sup> with 175 MW and the Scottish company, Aggreko, which has an installed capacity of 100 MW. They are responsible for 10% of the energy production, most of this is exported to South Africa. There is a public-private partnership ownership in the transmission line as well. MOTRACO is responsible for a dedicated line connecting South Africa to the aluminium smelter in the south of Mozambique, which is responsible for more than 60% of energy consumption in Mozambique.

At the distribution level, the license to a private company to manage an off-grid system in northern Inhambane was withdrawn since the company failed to fulfil its commitments related to the expansion plan and new connections. The administration of the national electrical transmission grid is carried out by a public law entity that ensures its operation and the reliable and efficient expansion of electrical energy supply. Investors are called to participate in the development of the transmission grid.<sup>72</sup>

In the hydrocarbon sector, there are a number of multinational corporations engaged in the importation and distribution of oil and LPG, including BP, Total, GALP and SASOL, and the public company PETROMOC. Two more multinational energy corporations are involved in the research, exploration and processing of oil and natural gas in the Rovuma Basin on the northern coast of Mozambique, the American company Anadarko Petroleum and the Italian ENI, in collaboration with the public company, ENH. There is a plan to construct a liquefied natural gas plant.

## 9. Regional integration

*The 2015 International Energy Charter firmly supports its signatories enhancing regional cooperation in order to meet common energy challenges, acknowledging that enhanced energy trade is a powerful catalyst for strengthening regional cooperation for energy security. Members of the IEC agree to develop cooperation with regional organisations for sharing experience and specific examples from national practice in the area of sustainable development, access to modern energy services, energy poverty reduction, clean energy, energy efficiency, as well as the development and broader use of new clean technologies. Under the IEC, the freedom of movement of energy products, and the development of an efficient regional energy infrastructure, is essential to facilitate the development of stable and transparent trade in energy.*

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71 CTGR a joint venture between EDM and a South Africa private company Sasol Energy Group.

72 Electricity Law 21/97, Article 14, numbers 1 and 3.

The combination of the wide availability of energy resources of the country (gas, hydro, renewables, and coal) and the size of the regional market provides opportunities for greater attractiveness for projects and revenue generation, while improving the balance of payments.

The most important regional energy integration policy document is the SADC protocols on trade and on energy. The SADC Energy Protocol<sup>73</sup> establishes, as a general principle, the use of energy to support development and economic growth, alleviate poverty and to improve the level and quality of life throughout the SADC region. It also provides the use of energy to promote collective self-reliance and creating an atmosphere that provides for the private sector to participate fully in the development of energy in the region.

Moreover, the SADC parties have established the Southern African Power Pool - SAPP protocol in 1995, with the purpose of ensure energy supply within the SADC. Therefore, combining national power system into a regional electricity market so that all State members can benefit and reduce costs to access the energy resources in the region. Consequently, using energy to support the economic growth and development, alleviation of poverty and improvement of the standard and quality of life throughout the Region. For example, the SAPP has identified many interconnector projects: Mozambique-Malawi Interconnector is expected to be completed by 2015; Zambia-Tanzania-Kenya interconnector; interconnection of Angola; and the Mozambique energy backbone projects.<sup>74</sup>

This energy trade ambitions are well embodied on the principles of the IEC. The SAPP protocols stipulates that member States should co-operate in the development of energy and energy pooling to ensure security and rehabilitee of energy supply and the minimization of costs including the harmonisation of laws, methods and the participation of private sector. Similarly, the EC promotes trade and co-operation between member States as well as ensuring conditions to promote private investor to participate in the development of the energy sector.

## 10. National investment law

*In recognising the importance of energy security for energy producing, transit and consuming countries (regardless of their state of development), the **2015 International Energy Charter** encourages cooperation to promote closer and mutually beneficial commercial relations and investments in the energy sector. Signatories agree to create a climate favourable to the operation of enterprises and to the flow of investments and technologies. In order to promote the flow of investment, signatories agree to make every effort to remove all barriers to investment in the energy sector and provide, at national level,*

<sup>73</sup> Resolution 52/1998 ratifies the cooperation agreement in the field of community energy for the Southern African Development Community (SADC), signed on August 24, 1996in Lesotho.

<sup>74</sup> See <http://www.sadc.int/themes/infrastructure/en/electricity-generation/>, (Last viewed at 11 August 2015)

*for a stable and transparent legal framework for foreign investment in accordance with relevant international laws and rules on investment and trade.*

## **10.1. Investment Protection and Promotion**

### **a) Investment Protection:**

Strategically, Mozambique has been taking steps to promote favorable conditions for greater flow of investments made by investors. One of the most important mechanisms is the signing Bilateral to attract investors from different nations. These, International agreements grant standards of protection to the foreign investors, such as Fair Equitable Treatment, National Treatment, Most Favored Nation, Umbrella Clauses. Moreover, the country is part of the New York Convention on The Recognition and Enforcement of Foreign Arbitral Awards of 1958<sup>75</sup> as well as part of ICSID.<sup>76</sup> In addition, many other forums are available like ICC – International Chamber of Commerce.<sup>77</sup> With this legal framework in place, the foreign investor can fully enforce such rights provided. However, many issues can be solved through negotiations and Mozambique as a low record in international investment arbitration, at the moment one ongoing case has been published in ICSID database – claim under the BIT between Mozambique and South Africa and procedures ICSID additional facility rules.

In general, the ECT and Mozambique BIT's drafted similar standards of protection. For example, searching Exploration and Production Concession Contracts (EPCC) for Oil and Gas and Mining Agreements published on the MIREME Website, conclude that many foreign investors structured their investment through the BIT between Mozambique and Mauritius.<sup>78</sup> The number 1 of the article 4 of the BIT, stipulates that, *"Investments and returns of investors of either Contracting Party shall at all times be accorded fair and equitable treatment in the territory of the other Contracting Party. Neither Contracting Party shall in any way impair by unreasonable nor discriminatory measures the management, maintenance, use, enjoyment or disposal of investments in its territory by investors of the other Contracting Party."* Equivalently, the number 1 of the article 10 of the ECT, stipulates *"... Such conditions shall include a commitment to accord at all times to investments of Investors of other Contracting Parties fair and equitable treatment. Such investments shall also enjoy the most constant protection and security and no Contracting Party shall in any way impair by unreasonable or discriminatory measures their management, maintenance, use enjoyment or disposal."* Alike there is provisions of compensation for losses and transfer of funds.

<sup>75</sup> Ratified on 11 June of 1998 and entered into force on 09 of September of 1998, see [http://www.uncitral.org/uncitral/en/uncitral\\_texts/arbitration/NYConvention\\_status.html](http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/NYConvention_status.html), Last visited 27 August 2015

<sup>76</sup> Signed on 04 April 1995 and entered into force on 07 July of 1995, See <https://icsid.worldbank.org/apps/ICSIDWEB/about/Pages/Database-of-Member-States.bak.aspx?tab=KtoO&rdo=BOTH>

<sup>77</sup> See arbitration clauses in concession agreements published in the Ministry website.

<sup>78</sup> This means incorporate the subsidiary company through Mauritius. Consequently benefit from the BIT provision and the DTA.

Furthermore, the umbrella clause becomes an important requirement for foreign investor especially in developing countries like Mozambique. This standard elevates the concession agreement or other into a treaty status *de per se* so that in case of violation of stipulated clauses the foreign investor can initiate an international arbitral dispute settlement under the treaty. The number 4 of article 4 of the BIT and the number 1 of article 10 ECT, specify that the State shall observe any obligations it has entered with any Investor of each contracting party. This highlights the desire of the State to respect assurances made to the foreign investor to invest in the country.

Since previous bidding rounds Mozambique has inserted in the concession contracts commitments to contract stability. The previous EPCC and Mining Agreements this stability provisions were assumed for the entire period of the contract excluding environmental regulation. However, in recent reforms of the petroleum (oil and gas) and mining laws (2014) the State reduced the period to a renegotiation within 10 years and refers only to fiscal stability (excluding legal stability).<sup>79</sup> Notwithstanding, this legal reform showed a growing tendency to reduce contract negotiations and add the provisions into the laws, promoting a clear, stable and transparency in the energy sector – core principle of the EC and the IEC.

In Mozambique, (like many countries) expropriation may occur in certain limited conditions especially for public purpose. This principle is inserted under the Constitution (refer to Constitution paragraph) *inter alia* many other laws including BITs. Also this includes nationalization and measures similar or with same effect of expropriation. Finally, investment risk service is provided by MIGA and OPIC.<sup>80</sup>

## **b) Investment promotion**

### **i. General Investment incentives**

To begin with, Mozambique signed vital Double Taxation Agreements (DTA) with relevant country State. At the moment of this report we have identified six DTA in force with the following countries: Mauritius, South Africa, UAE, Portugal and Italy.<sup>81</sup> Such agreements are important cause allow the foreign investor to off-set payments done on the business country with taxes in the country of origin of the investor. Therefore, they significantly increase their income and profits and investment recoup. In general, they include taxes like corporate income tax; personal income tax and others.

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79 See article 40 Law n. 27/2014 Establishes the specific tax regime and tax benefits of oil operations and article 58 of the Law n. 28/2014 Establishes the specific tax regime and tax benefits of mining activities.

80 See Investment Promotion Center website, <http://www.cpi.co.mz/index.php/en/investment-guarantees> (Last visited, 27 August 2015).

81 Ibid

The basic Investment law was approved in 1993<sup>82</sup> and its complementary legislation and amendments followed after that. The main investment laws are the following:

- The Investment Law No 3/93
- The Regulation of the Investment Law under the Decree Law No 43/2009
- The Fiscal Benefit Code under Law n° 4/2009
- The Public and Private Partnership Law No 15/2011

The main **Investment Law No 3/93, of 24 June** is argued to be one of the most far-reaching legislations of its type, as a result of the old Economic Rehabilitation Program under the International Monetary Fund (IMF) and World Bank Agreement with Mozambique. Together with the new national constitution in Mozambique, the legislation offers a more open and objective economic policy with the aim of encouraging more participation through investment and providing equity in the way which national and international investments are handled.

The Investment Law also enshrines a set of benefits and incentives aimed at promoting the investment in Mozambique, which can be divided in three main categories:

- *Protection of Property Rights* – The protection and security of investor’s assets and rights are protected through the judiciary, and includes industrial property rights<sup>83</sup> under the approved and released investment with compliance to the investment law and its regulations.
- *Capital Mobility* – Under the investment law, investors are allowed, under certain requirements, to transfer their funds (in particular, funds only related to their operations in Mozambique) overseas. This includes profits under the eligible investment, royalties and other incomes related to technology transfer, debt amortizations and interest incurred on the international market.
- *Duty and Fiscal Incentives* – A set of benefits has been enshrined to Foreign Direct Investment in Mozambique. It includes general benefits, namely tax exemptions (duty and VAT free) during the first five years from project commencement and other deductions in business operations. There are other very specific benefits which depends of the location of the investment, the sector in which the investment in made and the amount of investment being made in the project.

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82 Law n° 3/93, dated June 24, 1993.

83 Mozambique Industrial Property Code (IPI).

In addition to this, this law provides for environmental protection concerns. Under this law the investor at the conception, implementation and exploration phases must provide an environmental impact assessment and identify all current and potential pollution and sanity problems that may be caused by their operations.

In terms of dispute settlement, under this law all disputes involving an investor and the state, which cannot be settled by amicable or judicial means, can be arbitrated under the ICSID Convention and under International Trade Clearing.

The Public-Private Partnership Law No 15/2011, of 10 August established the orientation rules in the hiring, implementation and monitoring process of public-private partnerships of large-scale projects<sup>84</sup> and entrepreneurial concessions. Under this law, the financial benefit for the country is ensured by the allocation of a share hold (capital stock) quota no less than 5% and no more than 20% to Mozambican singular or collective entities and the state or public company.

There also a Decree No 62/99 for an Industrial Free Zone (IFZ), which is applicable for all singular, collective, public or private enterprises, dedicated on conception, development and administration of the IFZ and its eligible activities under this regime.

## **ii. Specific Incentives**

Apart from, the general incentives laws, Mozambique enacts specific laws to specific sectors of the economy especially those which require large investment like energy and Minerals resources. For example, the law number 27/2014 of September 23rd that creates a specific tax and benefits regime applicable to petroleum operations, alike the law number 28/2014 of September 23 for mining activities.

### **10.2. Other Relevant Laws to Investment**

#### **a) Land Right (DUAT)**

The DUAT - Right to use and enjoyment of the land, was approved by the Law No. 19/97, of 1 October. Natural and legal persons, whether nationals or foreigners and local communities can be DUAT holders. The DUAT granted for economic activities is valid for a period of 50 years, renewable for a similar period at the request of its holder.

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<sup>84</sup> Under this law, large-scale project means a project which authorized investment above MZN 12.500.000.000,00, equivalent to USD\$ 403 million.

## **b) Environmental Law**

The Environment Law was approved by the Law n. 20/97, of 1 October. This Law regulates the use and environmental management with a view to promoting sustainable development. The law regulates the attribution of the environmental license by the Ministry of Environment through the evaluation of the environmental impact process. The process is based on the assessment of the potential impact of the planned activity to determine its environmental feasibility and possible lightening.

## **c) Resettlement**

The decree n. 31/2012, of 8 August, approves the Regulations for the Resettlement Process Resulting from Economic Activities performed by public or private initiative which stipulates the basic rules and principles of the resettlement process with a view to the promotion of the citizens' quality of life and the protection of the environment. The resettlement is defined as the displacement or transfer of the affected population from one point of the national territory to another, accompanied by the re-establishment or creation of conditions equal to or above their previous standard of living, article 1, paragraph j). A Resettlement plan must be produced and approved which sets out the resettlement model detailing the new area, housing and new livelihood conditions. The preparation and approval of a Resettlement Plan precedes the issue of an environmental licence under the environmental legislation and is an integral part of the Environmental Impact Assessment Process. The District government is competent to approve such plan, after consult the aforesaid ministries.

Moreover, a Technical Resettlement Monitoring and Supervision Committee is created to follow the process is participated by the representatives of several ministries (Agricultural, Public Administration, Public works), local and provincial Government. In addition, other stakeholders take part representatives of the local communities' affected, civil society. Public participation includes public consultation and hearings and comprises: Requests for clarification; Formulation of suggestions and recommendations; Interventions in public meetings.

## **d) Labour Law**

In general, the labour Law number 23/2007 of August 1, requires that Mozambican employees assume skilled work positions and management position as well as establishes quotas for employment of foreign workers varying from 5%, 8%, 10% from large, medium to small companies respectively. However, in investment projects the investor can be granted different quotas as it is convenient to the project.

## 11. Research and transfer of technology

*Signatories to the **2015 International Energy Charter** recognise the need to promote research and technological cooperation amongst members. To this end, they agree to cooperate to enhance capacity building among signatories and mutual access to technical and economic data (as consistent with proprietary rights), to facilitate the exchange of technological information and know-how in the energy and environmental sectors. They also agree to promote cooperation to further research and development activities, encourage pilot and demonstration projects, as well as encourage the application of technological innovations. In addition to this, signatories recognise the industry's role in promoting vocational education and training in the energy sector and agree to cooperate in such activities, including: professional education, occupational training, and the dissemination of public information on energy efficiency and on renewable energy.*

The discovery of Mozambique's various renewable energy potential, as well as its mineral resource potential, brings the challenge of extracting the most benefit from these resources for sustainable development.

Mozambique currently has a research centre dedicated to technology for the energy sector. Technology transfer in the energy sector has been made via the foreign direct investment route, particularly through the production of electricity from natural gas and projects for the generation of new and renewable energy undertaken by FUNAE.

The manufacture of solar panels in Mozambique is an important technology transfer demonstration project that contributes to the reduction of import costs related to the importation of renewable energy generation equipment and additionally creates better conditions for energy security for the country.

The SADC Protocol on Energy establishes regional cooperation objectives in the fields of research, development, and the dissemination and transfer of low-cost energy technology and know-how between countries in the region.

In addition to this, Mozambique has hosted a number of summits and workshops related to the importance of enhancing research and technology transfer in the energy sector. An example of this is the Bioenergy Week II, an event that sought to submit proposals that will help in the dissemination of knowledge on renewable energy in Africa within the context presented by the United Nations (UN) during Rio + 20 under the Kyoto Protocol on climate change.

Nuclear technology is an alternative that is being considered in the region, with focus on the export potential of electricity from Mozambique. The activity of prospecting in Mozambique

may result in uranium discovery. For these reasons, it is important to understand this technology and this research is done through the National Atomic Energy Agency, which represents the country in international organizations.

Under the code of the tax benefits, investments in the areas of scientific research, the development of information and communication technologies, and research and development made during the development of a project are exempt from customs duties and VAT for the importation of equipment required for those activities.

The World Bank has been active role in supporting such activities in Mozambique particularly financing does. These are mainly focused on research, capacity building and legal reforms aiming key Ministers in the Extractive industry such as Ministry of Mineral Resources and Energy and the Ministry of Finance including supervised institutions. Usually, they are interdisciplinary programs involving law, management, many publications and others.

In Mozambique certain laws impose obligations regarding labour, training and domestic participation to facilitate transfer of technology and know-how. In general, large investments including energy are required to provide employment quotas and training to nationals. With regards to domestic participation there is no obligation to domestic participation when establishing a company unless specific sectors, for example oil and gas and PPP. In this context, certain economic activities like energy, oil and gas enact separate regimes because are considered critical to national development. In respect to a policy to increase the contribution of natural resources to sustainable development.

## 12. International cooperation

*Having regard to the principles of the UN Charter and to the outcome documents of various energy-related regional and international conferences, the **2015 International Energy Charter** signatories are aware of the obligations under major relevant multilateral agreements, of the wide range of international energy cooperation and of the extensive activities by existing international organisations in the energy field. Its signatories agree to enhance development of trade in energy consistent with major relevant multilateral agreements, such as the WTO Agreement and its related instruments, and to also ensure that the international rules on the promotion and protection of industrial, commercial and intellectual property rights are assigned. The IEC also affirms the importance of full access to adequate dispute settlement mechanisms, including national mechanisms and international arbitration in accordance with national laws and regulations and all relevant bilateral and multilateral treaties and international agreements.*

Mozambique is part of many actions between nations to promote common good and development including alleviate poverty and increase the living standards of the people and energy, trade and natural resources is a relevant issue. In this context, the country is part of several international organizations and actively participate on their programs, for example WTO, African Union including relations with the E.U. This agreements involve principles such as promotion of trade, tariffs, elimination of barriers to trade as well as new policies to the energy sector to increase the contribution of natural resources to national development. These policies are well embodied on the IEC principles.

Mozambique has many bilateral international treaties (BITs) and multilateral international treaties (MITs) signed to facilitate cross-border trade, investment promotion and investment protection.

Mozambique has more than 25 BITs (refer to Annex) agreements on trade and investment with several different countries, including countries of the European Union.

Just recently Brazil and Mozambique signed a Cooperation and Facilitation Investment Agreement (CFIA) in Maputo, Mozambique. The CFIA establishes an institutional framework and ensures investment cooperation, risk mitigation and dispute prevention. The Agreement aims to provide greater security for the investor in the signatory countries. Among the elements of the agreement is the nomination of an ombudsman by each contracting party and the establishment of a joint committee composed of government representatives from both countries.<sup>85</sup>

Mozambique is also a member of the World Trade Organization (WTO) and ratified all principles and rules under this organization. Since the general principles that guide the IEC are based on the rules of WTO, this aspect becomes important to put the country in a good position to join the IEC.

Mozambique also joined the Africa Clean Energy Corridor (ACEC) Initiative<sup>86</sup>, which aims to transform the current energy mix by promoting clean, indigenous, cost-effective renewable power to support Africa's economic growth. This initiative includes the mobilization of cost-effective renewable power options and the development of an enabling framework to attract investment for interaction of a higher share of renewables into the transmission network.

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<sup>85</sup> The CFIA was signed on 30th March 2015 by the Minister of Development, Industry and Foreign Trade of Brazil, Armando Monteiro and the Minister of Foreign Affairs and Cooperation of Mozambique, Oldemiro Baloi. UNCTAD: Investment Policy Hub: Brazil & Mozambique signed CFIA, Published on 01/April 2015, <http://investmentpolicyhub.unctad.org/News/Hub/Home/287>

<sup>86</sup> The ACEC initiative was endorsed by Ministers from countries of the Eastern and Southern Africa Power Pools at the fourth IRENA Assembly in January 2014 in Abu Dhabi.

The country is signatory of the WTO since 26 August 1995 and the EC incorporates the WTO rules and practice. Indeed, this shows Mozambique readiness on the issue of energy trade, as it is aligned with the same principles of the EC, non-discrimination, transparency and a commitment to the progressive liberalization of international trade. Moreover, the EC specifies the scope of trade in energy materials and products and energy related equipment.

The African Union is progressively taking significant role on creating and promoting new energy and natural resources. The African Union Commission - AUC has launched the Program for Infrastructure Development in Africa (PIDA), which includes the sector of energy. The country is part of the NEPAD which deals with the issue of energy. Recently the AU prepared and adopted (by several Ministry's) the Africa Mining Vision report which recommends new policies for structural reforms in Africa to achieve Millennium Development Goals, eradicate poverty and promote sustainable development based on Africa's natural resources.

### **13. Added value of acceding to the IEC and ECT**

#### **1. At the political level**

##### 1.1 Political signal of the country to international community

By signing the International Energy Charter, a country sends a political signal to the international community that it shares a number of international energy principles on trade, investment, transit and energy efficiency in such important sector as the energy sector. Since investment protection is the cornerstone of the Energy Charter, it would be a good chance for governments to send a message to the investor community of their endorsement of transparency and good governance. This would most of all benefit countries in unstable political situations and the ones, which seek to enhance their ties with some key countries from the Energy Charter constituency.

##### 1.2 Effects of modernization of the Energy Charter Process

The world's energy interdependence has dramatically intensified over the last decade. Improved energy security with multiple economic, technological and environmental benefits could be derived from international cooperation in the energy sector. At the same time potential interruptions to the global energy supplies due to conflicts, volatile energy prices, lack of investments and other challenges have resulted in a more fragile global energy architecture. Such challenges require both national and international responses. Where the problems cannot be adequately addressed by a country acting alone, acting cooperatively at the international level becomes essential for a country to protect its own interests.

The International Energy Charter is going to play a major role in establishing common principles to promote long-term cooperation in the energy sector based on mutual benefits. The institutional benefits of signing the IEC include, but not limited to, the following:

- The IEC is going to be an historic document that may be signed by more than 100 countries worldwide.
- The IEC provides inspiration and motivation to pursue energy security for all including producers, transit and consumer countries, as well as universal energy access.
- Signing the IEC means to join an established international framework of long-term cooperation in the energy sector.
- The IEC is a policy but not a legally binding framework that allows a country to strengthen energy security, promote access to energy resources and new markets, facilitate access to finance, benefit from experience exchange and multilateral cooperation on sustainable development of the energy sector.

## **2. At the strategic level**

### 2.1 Promotion of energy investments and trade

A country, by signalling its willingness to engage seriously in a dynamic political process resulting of the International Energy Charter as well as its ability to agree on a strategic, forward-looking document, demonstrates that it considers the Energy Charter Process and its tools as instruments of its choice. Thus, signature of the International Energy Charter would demonstrate to international investors that a country commits to the principles of secure investments. In this way, a country becomes a more attractive destination for international investments, while, at the same time, being able to use the International Energy Charter as a reference tool for own energy investment and trade initiatives.

### 2.2 Engagement in multilateral cooperation and good governance

It is difficult for countries to find isolated solutions to the complex and interlinked energy challenges, which know no borders. International cooperation is imperative to find effective, lasting and mutually beneficial solutions. The Energy Charter has a broad membership, involving developed and developing, energy exporting, importing and transiting countries. Signing the International Energy Charter will allow the signatory's representatives to assemble under the Energy Charter Ministerial Conference and Working Groups, which could serve as a platform for building relationships, and sharing of information related to the challenges faced in the energy sector. The challenges concerning security of supply, competitiveness and climate action should be solved through a common approach, to which the International Energy Charter will play an important role. Signatories to the International Energy Charter will acknowledge this common approach publicly, without any legal commitments.

### 2.3 Influential and confident position within the Energy Charter Process

Engagement to the International Energy Charter is an open and inclusive process. More than 80 countries from all over the world agreed the text of the International Energy Charter. The text reflects today's global energy challenges and international policy objectives. The openness of the International Energy Charter to new countries enhances the confidence and ownership of those countries in the Energy Charter process.

## **3. At the practical level**

### 3.1 Observer status with the Energy Charter Conference

Signing the International Energy Charter automatically grants an observer status, which will make it possible for new countries to attend the meetings of the Energy Charter Conference, without a right to vote.<sup>87</sup> Furthermore, observer countries will have the possibility to attend official meetings of subsidiary bodies on political and expert level in the capacity of observers with a right to speak.

If the necessary funding is provided, observers may benefit from activities of the Energy Charter Secretariat like forums, executive training programmes, energy efficiency reviews or reports on investment climate and market structure. Observers may be invited to send seconded experts and trainees to the Secretariat in Brussels in view of deepening their engagement in the process of applying the principles of the International Energy Charter and consider the adoption of the Energy Charter Treaty.

### 3.2 Getting familiar with the Energy Charter Treaty

The Energy Charter Treaty is unique in so far as it provides a legally binding framework for energy cooperation for a large and diverse membership.<sup>88</sup> However, it is apparent that accession by new countries to the Treaty is not something that can be achieved over night. For new members sharing the principles of the International Energy Charter, it is imperative to thoroughly analyse the provisions of the Energy Charter Treaty before committing to further steps. Signing the International Energy Charter can only be a beginning that does not pre-empt in any way the decision of a state to accede to the Energy Charter Treaty. As observers to the Energy Charter Conference, non-members will however have the opportunity to learn more about the Treaty, its benefits and obligations, and will cooperate

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<sup>87</sup> Observer status is not defined in the Energy Charter Treaty. For this purpose, a Working Group on Procedural Issues was established at the 24th Meeting of the Energy Charter Conference in Astana.

<sup>88</sup> The ECT was signed in December 1994 and entered into force in April 1998. To date the Treaty has been signed or acceded to by 54 contracting parties, including the European Union.

closely with the members to that end. This will enable them to make an informed decision about possible further steps.<sup>89</sup>

### 3.3 Possibility to initiate the Early Warning Mechanism

Countries signing the International Energy Charter are automatically granted a right to initiate the Early Warning Mechanism (EWM). Its aim is to provide a non-binding framework for preventing and overcoming emergency situations in the energy sector related to the transit and supply of electricity, natural gas, oil and oil products through cross-border grids and pipelines.<sup>90</sup> Parties can refer to it, voluntarily, on a case-by-case basis. It will be complementary to other mechanisms for early warning and dispute resolution agreed bilaterally between individual parties. The EWM would help to resolve energy conflicts and thereby enhancing the energy security for energy producing, consuming and transit countries.

## **14. Conclusions and recommendations**

### *a) Challenges*

The main challenges of the energy sector in Mozambique are:

- i. Short-term response of the power supply needs to meet the demand linked to economic and social projects currently underway, with particular emphasis on the south and the special economic zone of Nacala in northern Mozambique.
- ii. Mobilization of resources for the implementation of transmission line projects and power generation (approximately 5000 MW) and other energy infrastructure to improve quality and efficiency in energy supply.
- iii. Increase access to diverse forms of energy in a sustainable manner, contributing to the well being of the population, industrialization and economic welfare.
- iv. Combating and preventing loss of power resulting from dishonest attitudes such as vandalism, theft of materials and equipment from the national grid and theft of electricity through fraud and illegal connections.

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<sup>89</sup> A state or regional Economic Integration Organisation that wishes to accede to the Energy Charter Treaty is required to be a signatory of the 1991 European Energy Charter, the original political declaration that is expected to be adopted together with the Energy Charter Treaty.

<sup>90</sup> Article 2.1 of the Model Energy Charter Early Warning Mechanism, CC 501, 5 November 2014.

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*b) Open issues*

Many programs and actions are being considered by the Government of Mozambique in order to make the energy sector more attractive and dynamic for investment, thereby contributing to a more sustainable socio-economic growth for the country.

The renewable energy market in Mozambique is still underdeveloped. The government is considering the introduction of a feed-in-tariff system in order to encourage further investment. The government has already begun the analysis for a draft law for the introduction of a feed-in-tariff in Mozambique, which will be guaranteed by the public company EdM, the main electricity distributor in the country.

The government is also in the process of endorsing National Electricity Council (CNELEC) as the national regulator for the entire energy sector in Mozambique, with jurisdiction in all energy industry areas of activity. The exception would be nuclear energy because the nature of activity led to the creation of a specific National Agency of Atomic Energy (ANEA).

However, the relevant status, powers and responsibilities for the regulator have not yet been defined. Project contracts are currently entered into between the concessionaire and the relevant authority (Ministry of Energy, Council of Ministers and Provincial Governors). In the current environment, CNELEC is the mandated authority responsible for serving as a consultative body, as well as conciliation, mediation and arbitration authority with regards to disputes between different concessionaires and between concessionaires and consumers.

Also, the ongoing completion of the proposed Atomic Energy Act is critical to provide the necessary legal and regulatory framework necessary for the continuity of economic and social activities around nuclear science and technological development.

*c) Recommendations*

Mozambique's main policies and strategies for energy sector development are in line with the principles of International Energy Charter. Considering that Mozambique has a huge and diversified energy of untapped potential and that substantial FDI is required for its development, Mozambique is in a good position to begin the process of accession to the International Energy Charter. Further support for this is based on Mozambique's continued work towards creating favourable conditions for liberalisation of the energy market, which provides a series of incentives for investors (including tax benefits and expatriation of profits, just to name a few).

The national constitution provides for non-discrimination and as a member of the WTO, Mozambique already follows the main principles of the International Energy Charter. As a

result, Mozambique meets the basic conditions to adopt the International Energy Charter and become an observer of the Energy Charter.

Observership is a “light” form of participation in the Energy Charter process.<sup>91</sup> It offers interested non-members the possibility to become more familiar with the Energy Charter Treaty to establish formal contacts with member countries and other observers and participate in the international forum for energy dialogue established by the Energy Charter. Observers do not have any legal obligations under the Energy Charter Treaty. In particular, they do not have to contribute to the budget of the Organization. Observership may be – although not necessarily – a transitional phase towards full membership.

As an observer member, Mozambique would be subject only to a political commitment, pledging to move in the same direction with the principles of International Energy Charter and all of its sector policies, including legal reform.

It is also recommended a number of actions to be taken before the accession of Mozambique to this initiative:

- i. Conducting a workshop in Maputo by the Energy Charter Secretariat, involving all energy sector stakeholders in order to further develop the principles of the International Energy Charter. This workshop will allow other entities in the energy sector, to become more familiar with the International Energy Charter and the Energy Charter Treaty, and provide a platform where stakeholders will be able to share their ideas and experiences regarding the Energy Charter.
- ii. Receiving the legal opinion from the legal department of the Ministry of Energy will be important in the process to signing the International Energy Charter. Although the International Energy Charter is just a political declaration without any legal or financial obligation, it is a necessary required for this type of membership.
- iii. The first contact between Mozambique and the Energy Charter Secretariat was in July 2014, through the Mozambican Embassy, Permanent Mission to the Kingdom of Belgium, The Netherlands, and the European Union. At this time, it was expressed the country's interest in knowing more about the Energy Charter Process.

It is also recommended that the Energy Charter Secretariat expands its initiative to more countries in the southern African region, given that there is a Protocol of Cooperation at the level of countries in Southern Africa (SADC) that include cooperation in the fields of trade

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91 The Energy Charter Treaty: A Reader's Guide (Energy Charter Secretariat; Brussels).

and energy sector investment. There is a convergence of the main objectives and principles of SADC and the International Energy Charter.

As a signatory of the International Energy Charter, Mozambique will have the opportunity to extend their participation in the international platform for cooperation on energy and benefit from a wide range of opportunities, including:

- i. Cooperation on technological development and innovation activities in the fields of production, conversion, transmission, distribution and the efficient and clean use of energy, taking into account their obligations and nuclear non-proliferation commitments.
- ii. Programs and activities in the research domain and technological development; dissemination and exchange of relevant information and transfer of know-how on technologies, with particular emphasis on energy efficiency and renewable energy field, where its relevance to Mozambique has been higher in recent years due to the survey of the country's renewable energy potential and the importance it has on rural electrification in remote areas of the country.
- iii. Institutional training programs for staff linked to the energy sector in the various policy areas, which may extend to academic institutions (that is, vocational, technical and/or higher education institutions) in Mozambique.

Besides that, the International Energy Charter respects the sovereignty of each state over its energy resources, as well as the right to regulate the transmission and the transport of energy in their territories, respecting all relevant international obligations. In the spirit of political and economic cooperation, the International Energy Charter promotes the development of efficient, stable and transparent energy markets, regional and global energy cooperation based on the principle of non-discrimination and commercial-based pricing, taking into account environmental concerns and the role of energy in national development of each country.

As a signatory of the International Energy Charter, Mozambique will be engaged in the implementation of the general principles of the International Energy Charter, which will culminate in the development of two annual reports prepared by officials seconded to the Energy Charter Secretariat, sent by the Government of Mozambique, covering the following themes:

- i. Market Structure and Investment Climate Report; and
- ii. In-Depth Report on Energy Efficiency in Mozambique.

Expansion of the International Energy Charter to more countries in the region is an important step that needs to be implemented. Mozambique is already an integrated country within the SADC region and it would be advantageous that membership to the International Energy Charter include all the member countries in the SADC region. This would facilitate further convergence of the energy policies in the light of the basic principles of the International Energy Charter on an international level.

*d) Procedure to adopt the International Energy Charter*

The previous section pointed out the added value of signing the International Energy Charter. All that is required to adopt it as an international political declaration on energy cooperation is to formally express such desire to the Energy Charter Secretariat in writing, requesting an invitation to formal signing of the International Energy Charter in The Hague in May, 2015. The International Energy Charter can also be signed after that date, following the same procedure.

**The Author**

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- Resolution No 22/2009 of 21 May 2009 - Biofuels Policy and Strategy.
- Resolution No 62/2009 of 14 October 2009 – Renewable Energy Policy.
- Resolution No 64/2009 of 2 November 2009 – Natural Gas Market Development Strategy.
- Decree No 67/2009 of 11 December 2009 – National Atomic Energy Agency.

#### (B) Power generation and supply

- Law No 21/97 of 1 October 1997 - Electricity Law.
- Decree No 8/2000 of 20 April 2000 - Regulations on the Powers and Procedures for the Award of Concessions, and the Import and Export of Energy.
- Decree No 42/2005 of 29 November 2005 - Regulations on the National Power Transmission Network (“NPTN”).
- Decree No 43/2005 of 29 November 2005 entrusting the role of NPTN Electricidade de Moçambique.
- Decree No 45/98 of 25 September 1998 – Regulations on management of power facilities built or renovated with own funds in the districts that has not been assigned to a public company.
- Ministerial Diploma No 31/85 of 31 July 1985 - Regulations on technical skills for preparing, implementing and operating power facilities of particular service.
- Decree No 48/2007 of 22 October 2007 - Licensing regulations for electric facilities
- Decree No 25/2000 of 3 October 2000 – Electricity National Council (CNELEC) Statutes.
- Decree No 46847 - Regulation of safety of high voltage power lines and distribution networks of low voltage power.
- Decree No 46847 - Regulation of safety of substations and stations of transforming and sectioning.
- Decrees 29782, 30308 and 37823 - Regulation of safety of low voltage power facilities.

#### Other relevant legislation

##### (C) Corporate

- Decree-Law No 2/2005 of 27 December 2005 as amended by Decree-Law No 2/2009 of 24 April 2009 – Mozambican Commercial Code.
- Decree 49/2004 of 17 November 2004 - Commercial Activities’ Licensing Regulations.

##### (D) Investment

- Law No 3/93 of 24 June 1993 - Investment Law.
- Decree No 14/93 of 21 July 1993, as amended by Decree No 43/2009 of 21 August 2009 - Investment Law Regulations.

##### (E) Tax & Customs

- Law No 34/2007 of 31 December 2007, as amended by Law No 20/2009 of 10 September 2009 - Corporate Income Tax Code.
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#### (F) Labour

- Law No 23/2007 of 1 August 2007 - Labour Law.
- Decree No 55/2008 of 30 December 2008 - Expatriate Regulations.
- Decree No 38/2006 of 27 September 2006 – Visa Regulations.

#### (G) Environment

- Resolution No 5/95 of 3 August 1995 – National Environment Policy.
- Law No 20/97 of 1 October 1997 - Environment Law.
- Decree No 45/2004 of 29 September 2004 as amended by Decree No 42/2008 of 4 November 2008 – Environmental Impact Assessment Regulations.
- Decree No 13/2006 of 15 June 2006 – Waste Management Regulations.

#### (H) Foreign Exchange

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#### (I) Land

- Law No 19/97 of 1 October 1997 - Land Law.
- Decree No 66/98 of 8 December 1998, as amended by Decree No 1/2003 of 18 February 2003 and Decree No 79/2009 of 29 December 2009 - Land Law Regulations.

#### (J) General

- Mozambican Constitutional Law – Approved on 16 November 2004.
- Mozambican Civil Code – Decree No 47344 of 25 November 1966.
- Civil Procedure Code – Decree No 1/2005 of 27 December 2005.
- Law No 11/99 of 8 July 1999 - Arbitration, Conciliation and Mediation Law.

- Decree No 15/2010 of 24 May 2010 - Regulations on procurement for public works, supply of goods and provisions of services to the state.

## ANNEX A

Short title	Parties	Status	Date of signature	Date of entry into force	Clauses related to energy	Investor – State Arbitration
<b>MULTILATERAL INVESTMENT TREATIES</b>						
EU-SADC Interim Agreement	EU (European Union); SADC (Southern African Development Community);	Signed	22/01/2009		<p>Rules for cooperation in trade in goods, supply-side competitiveness, business enhancing infrastructure, trade in services, trade related issues, trade data, institutional capacity building, fiscal adjustments.</p> <p>Facilitation of transit movements is regulated in Article 40.</p> <p>Energy is not a priority sector according to its appendixes.</p>	NA
SADC Investment Protocol	SADC (Southern African Development Community);	In force	18/08/2006	16/04/2010	NA	NA
Mozambique -US TIFA	Mozambique; United States of America;	In force	21/06/2005	21/06/2005	NA	NA
Cotonou Agreement	ACP (African, Caribbean and Pacific Group of States); EU (European Union);	In force	23/06/2000	01/04/2003	According to Article 23, cooperation will develop mining and energy sectors,	NA

Short title	Parties	Status	Date of signature	Date of entry into force	Clauses related to energy	Investor – State Arbitration
					encouraging private sector involvement and development.  There are no rules regarding investment protection or promotion.	
SADC Treaty	SADC (Southern African Development Community);	In force	17/08/1992	30/09/1993	NA	NA
AU Treaty	AU (African Union);	In force	03/06/1991	12/05/1994	Chapter IX, regarding energy and natural resources promotion, according with the protocol on natural resources.	NA
OIC Investment	OIC (Organisation of the Islamic Conference);	In force	05/06/1981	23/09/1986	Article 3 indicates that " <i>parties shall endeavour to open up various fields and investment opportunities to the capital on the widest possible scale.</i> "	Article 16 contains a fork on the road provision.  Article 17 allows conciliation or arbitration.
<b>BILATERAL INVESTMENT TREATIES</b>						
Algeria - Mozambique BIT (1998)	Algeria; Mozambique;	In force	12/12/1998	25/07/2000		
BLEU (Belgium-	BLEU (Belgium-Luxembourg	In force	18/07/2006	01/09/2009	Applicable to all investments,	Article 10:

Short title	Parties	Status	Date of signature	Date of entry into force	Clauses related to energy	Investor – State Arbitration
Luxembourg  Economic Union) - Mozambique BIT (2006)	Economic Union);  Mozambique;				according to  Article 12.  Article 7 focused on environmental measures/rules  Survival clause: 10 years	<ul style="list-style-type: none"> <li>• Cooling off period: 6 months.</li> <li>• ICSID and ICSID additional facility, ad hoc tribunals under UNCITRAL Rules.</li> <li>• Enforcement of awards under Washington and New York conventions.</li> </ul>
China - Mozambique BIT (2001)	China; Mozambique;	In force	10/07/2001	26/02/2002		
Cuba - Mozambique BIT (2001)	Cuba; Mozambique;	In force	20/10/2001	26/02/2002		
Denmark - Mozambique BIT (2002)	Denmark; Mozambique;	In force	12/10/2002	30/12/2002		
Egypt - Mozambique BIT (1998)	Egypt; Mozambique;	Signed	08/12/1998			
Finland - Mozambique BIT (2004)	Finland; Mozambique;	In force	03/09/2004	21/09/2005	Applicable to all investments, according to Article 13.  Survival clause: 10 years	<p>Article 9:</p> <ul style="list-style-type: none"> <li>• Cooling of period: 3 months.</li> <li>• Fork in the road clause</li> <li>• ICSID, ICSID Additional Facility, ad hoc tribunals under UNCITRAL</li> </ul>

Short title	Parties	Status	Date of signature	Date of entry into force	Clauses related to energy	Investor – State Arbitration
						<p>Rules.</p> <ul style="list-style-type: none"> <li>• Enforcement of awards under Washington and New York conventions.</li> </ul>
France - Mozambique BIT (2002)	France; Mozambique;	In force	15/11/2002	06/07/2006		
Germany - Mozambique BIT (2002)	Germany; Mozambique;	In force	06/03/2002	15/09/2007	<p>Survival clause: 15 years</p> <p>Applicable to all investments</p>	<p>Article 11:</p> <ul style="list-style-type: none"> <li>• Cooling of period: 6 months.</li> <li>• ICSID, ad hoc tribunals.</li> </ul>
India - Mozambique BIT (2009)	India; Mozambique;	Signed	19/02/2009		<p>Applicable to all investments, according to Article 12.</p> <p>Survival clause: 15 years</p>	<p>Article 9:</p> <ul style="list-style-type: none"> <li>• Cooling of period: 6 months.</li> <li>• Conciliation under UNCITRAL Rules</li> <li>• ICSID, ICSID Additional Facility, ad hoc tribunals under UNCITRAL Rules.</li> </ul>
Indonesia - Mozambique BIT (1999)	Indonesia; Mozambique;	In force	26/03/1999	25/07/2000	<p>Applicable to all investments, according to Article 11.</p> <p>Survival clause: 10 years</p>	<p>Article 7:</p> <ul style="list-style-type: none"> <li>• Cooling of period: 3 months.</li> <li>• Fork in the road clause</li> <li>• Arbitration or conciliation</li> <li>• ICSID, ICSID Additional</li> </ul>

Short title	Parties	Status	Date of signature	Date of entry into force	Clauses related to energy	Investor – State Arbitration
						Facility, ad hoc tribunals under UNCITRAL Rules.
Italy - Mozambique BIT (1998)	Italy; Mozambique;	In force	14/12/1998	17/11/2003		
Japan - Mozambique BIT (2013)	Japan; Mozambique;	Signed	02/06/2013		Applicable to all investments, according to Article 27.  Survival clause: 10 years	Article 17: <ul style="list-style-type: none"> <li>• Cooling of period: 3 months.</li> <li>• ICSID, ICSID Additional Facility, ad hoc tribunals under UNCITRAL Rules, any arbitration in accordance with other arbitration rules.</li> <li>• Enforcement of awards under Washington and New York conventions.</li> </ul>
Mauritius - Mozambique BIT (1997)	Mauritius; Mozambique;	In force	14/02/1997	26/05/2003	Applicable to all investments.  Survival clause: 10 years	Article 8: <ul style="list-style-type: none"> <li>• Cooling of period: 3 months.</li> <li>• Any arbitration institution or ad hoc arbitration in accordance with ICSID Rules.</li> </ul>

Short title	Parties	Status	Date of signature	Date of entry into force	Clauses related to energy	Investor – State Arbitration
Mozambique - Netherlands BIT (2001)	Mozambique; Netherlands;	In force	18/12/2001	01/09/2004	Applicable to all investments, according to Article 27.  Survival clause: 15 years	Article 9: • Arbitration or conciliation under ICSID Convention.
Mozambique - Portugal BIT (1996)	Mozambique; Portugal;	In force	28/05/1996	31/10/1998	Applicable to all investments, according to Article 1.  Survival clause: 10 years	Article 9: • Cooling of period: 6 months. • Arbitration under ICSID Convention.
Mozambique - South Africa BIT (1997)	Mozambique; South Africa;	In force	06/05/1997	28/07/1998		
Mozambique - Spain BIT (2010)	Mozambique; Spain;	Signed	18/10/2010			
Mozambique - Sweden BIT (2001)	Mozambique; Sweden;	In force	23/10/2001	01/11/2007		
Mozambique - Switzerland BIT (2002)	Mozambique; Switzerland;	In force	29/11/2002	17/02/2004	Applicable to all investments, according to Article 1.  Survival clause: 20 years	Article 9: • Cooling of period: 6 months. • Arbitration under ICSID Convention, or ad hoc arbitration under UNCITRAL Rules.

Short title	Parties	Status	Date of signature	Date of entry into force	Clauses related to energy	Investor – State Arbitration
Mozambique - United Arab Emirates BIT (2003)	Mozambique; United Arab Emirates;	Signed	24/09/2003			
Mozambique - United Kingdom BIT (2004)	Mozambique; United Kingdom;	In force	18/03/2004	12/05/2004		
Mozambique - United States of America BIT (1998)	Mozambique; United States of America;	In force	01/12/1998	03/03/2005	Applicable to all investments, according to Article 1.  Survival clause: 10 years	Article 9:  <ul style="list-style-type: none"> <li>• Fork in the road clause.</li> <li>• ICSID, ICSID Additional Facility, ad hoc tribunals under UNCITRAL Rules, any arbitration in accordance with other arbitration rules.</li> <li>• Enforcement of awards under Washington and New York conventions.</li> </ul>
Mozambique - Viet Nam BIT (2007)	Mozambique; Viet Nam;	In force	16/01/2007	29/05/2007		
Mozambique - Zimbabwe BIT (1990)	Mozambique; Zimbabwe;	Signed	12/09/1990			





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