

REPUBLIC OF MOZAMBIQUE



MINISTRY OF ENERGY

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**Project identification note:**

**Energy sector**

**Part 1**

**Institutional and Organisational Strengthening and Capacity**

**Development in the Ministry of Energy**

UNDER THE INDICATIVE BILATERAL COOPERATION PROGRAMME

## **Institutional and Organisational Strengthening and Capacity Development in the Ministry of Energy**

### **1. Institutional and Organisation Strengthening and Capacity Development in the Energy Sector**

The project for institutional and organizational strengthening and capacity development is meant to create enabling conditions for the energy sector to plan, manage, implement and monitor all sector activities including the ones funded by development partners such as the Kingdom of Belgium from 2013 and onwards as foreseen in the ICP 2013-2017.

The Ministry of Energy is the lead agency to guide the energy sector towards the provision of reliable, affordable and clean energy in Mozambique. The key entities within the Ministry of Energy include the Conselho Nacional de Electricidade (CNELEC – the regulating authority), ANEA (National Agency for Atomic Energy) EDM (Electricidade de Moçambique public enterprise, responsible for on grid electricity production, transport and distribution), FUNAE (Fundo de Energia - responsible for implementing the national energy policy and strategy for off grid situations) HCB (Hidroeléctrica de Cahora Bassa), MOTRACO (Companhia de Transmissão de Moçambique, regional transport of Energy) and PETROMOC Petróleos de Moçambique – distribution of petroleum products). The MoE, being an institution that merges functions of classic and renewable energy provision and development, planning and distribution in urban, sub-urban and rural areas, has a need for expert support in order to make the institution execute its mandate successfully.

The Ministry of Energy consists of four Directorates, namely Electrical Electricity (DNEE), Fuels (DNC), Study & Planning (DEP) and New and Renewable Energy (DNER). It is proposed to anchor this program within the DNER, while keeping the possibility open to work with other directorates if and when required.

Strategic areas that need strengthening in order to realize the priority goals of the energy sector include:

- The expertise necessary to establish a revised institutional framework for the electricity sector with focus on energy efficiency, renewable energy and an adequate energy mix;
- Strategic planning of the expansion and diversification of electricity generation, an adequate energy mix and energy efficiency including expertise relating to public-private partnerships,;
- The skills to negotiate and manage large and technically complex electricity, energy efficiency and renewable energy projects;
- Provision of an Enabling Environment for the private sector to invest in on-grid and off-grid renewable energy;
- Expertise in tariff setting and regulation of a mixed public and private sector market;
- Expertise in monitoring and management of renewable energy systems and energy efficiency systems
- Coordination of rural electrification interventions between grid extension by EDM and off-grid solutions;.

Capacity building in the energy sector will also be supported through the other donors of the energy sector working group. Synergies with these initiatives will be sought, and capacity building financed through this ICP will focus on four broad areas:

- Institutional development, elaboration of regulatory frameworks and training courses in project management, monitoring of (renewable) energy systems, needs assessments and data collection. Recruitment of short term technical assistance (experts and/or consultants) to strengthen the energy sector with focus on energy efficiency and the implementation of the renewable energy component of their national policy (total estimated cost 2.0 M€ )
- Industrial Attachment Program: this will consist of an internship programme in energy efficiency and renewable energy ,estimated cost of 0.2 M€ ;
- International Technical assistance (2 x 5 years) to the MoE and short and long term training in renewable energy and energy efficiency, planning and regulation (1.4 M€ );
- Private Sector Involvement: Support for research into appropriate modalities and guarantees for the involvement of private sector operators in the sector and implementation of a demo program to encourage private sector to take over energy efficiency and renewable energy in particular the solar water heater program (0.4M€).

Capacity needs assessment report of end 2012 shows gaps in institutional, organizational and personnel capacity. An institutional and organizational capacity needs assessment is required in the MoE as well as in FUNAE during 2014/2015.

It is intended to strengthen the strategic planning functions of MoE through capacity development by recruitment of technical expertise that will train MoE counterpart staff on the job and will assist in achieving the sector objectives. It is proposed that International experts should be employed for a minimum period of five years to ensure knowledge and skills transfer. For short term trainings and specific capacity development, short term expertise will be mobilized to provide expertise for institution capacity building in order to establish enabling structures, systems and processes. Well qualified local counterparts will be recruited to work with the recruited experts.

Complementary to this day to day capacity building, areas shall be identified that will be strengthened through specific training courses for energy sector staff, that will assist in refining their skills and improve their performance, such as training in project management, energy economics, power contract negotiation, energy modeling, monitoring of systems and data collection for example. Another important aspect is capacity building in the field of energy economics as well as regulatory and legal framework development, with the aim to promote access to sustainable and clean energy for all.

The quality of all measures and interventions taken in order to improve the capacity of the various institutions will be ensured with cooperation of the Energy sector working group.

Because rural development by introducing renewable energy and energy efficiency is also a focus area of the cooperation with the Government of the Kingdom of Belgium, we propose to put specific emphasis on the capacity building in these areas that are new in Mozambique, and this through the Directorate general of Renewable Energies in the MoE. The Universidade Eduardo Mondlane and other education institutions will be encouraged to teach relevant subjects such as energy efficiency, energy economics, renewable energy resources, geophysics, solar and wind energy, or water resources management and hydrology. Presently academic and practical training in these important fields available in Mozambique is limited. We, therefore, propose to sponsor young Mozambicans in higher education in Renewable Energy's, i.e. hydro, solar and wind energy, biomass, wave energy and energy efficiency; Engineering, Master and post graduate courses. During the formulation phase of the projects it shall be determined whether it will be possible to establish the required academic courses in Mozambique, or whether in the first phase it will be more beneficial to send Mozambicans to established academic and training institutions

abroad. To further develop Mozambique's renewable energy resources, technical assistance is essential. We propose to recruit experts in Renewable energy, especially small Hydro power, solar energy & wind energy.

The Government of Mozambique in its energy strategic plan has put emphasis on the increasing involvement of private sector in energy sector activities, specifically in electricity generation, renewable energies, electrification and energy efficiency. Private sector involvement is essential for the realization of universal access to sustainable energy. However the existing capacity of the local private sector in Mozambique is still low, and there are only limited opportunities for companies to obtain a return on investment. It is therefore proposed to build the capacity of the private sector to become more active in renewable energy development and to be able to provide energy services. This shall include training on Solar PV and solar thermal systems to enable companies to sell and maintain quality products, training in electricity distribution works and in energy efficiency measures.

The project could also finance studies and investigations into appropriate measures (guarantees; feed in tariffs...) for guaranteeing a more conducive environment for private sector operators, taking duly into account the actions already being undertaken by the GoM and other donors such as the EU, Norway and the WB.

The capacity building component is a new intervention in so far as capacity building was not a specific component of the Belgian assistance to the energy sector to date. However, we wish to acknowledge that within the context of the technical projects on hydropower and rural electrification, several trainings have already been funded with Belgian support, such as training in GIS data gathering and mapping. Beyond that, the Belgian Study and Consultancy Fund has as function to support the development of strategic or and specific studies, among others.

## **2. Ministry in charge of preparing and implement the intervention**

The institutional partner for this project will mainly be the MoE, in particular the Directorate of New and Renewable Energy (DNRE). Indirectly the other Directorates of the Ministry and the Fundo de Energia (FUNAE), as well as other agencies like Utility Regulatory Authority, EDM and the private sector will also benefit from the project. For FUNAE a specific program will be developed under this same ICP with separate investment capacity development portfolios.

Institutional Strengthening and Capacity Building Component as well as the regulatory framework will be prepared and implemented by MoE in cooperation with the donors. In the context of public sector reform, the mandate of the Ministry will mainly be in the development of sector policies and strategies as well as in the supervision of its implementation. At the same time FUNAE has been mandated to implement energy sector projects and programs in rural areas and will be actively involved in the formulation of the specific projects under the cooperation with the Government of Belgium as well as their implementation. EDM has his activities in electricity production, transport and distribution.

## **3. General and specific objectives of the intervention**

The general objective of the intervention is:

The development of the energy sector is enhanced in order to power the socioeconomic development of the country and to contribute to the welfare of its people.

Specific objective is:

The institutional, organizational and individual capacities of Ministry of Energy (MoE) are strengthened in advancing energy access, provision and generation of renewable energy and energy efficiency.

#### **4. Target group, beneficiaries and justification of choosing them, geographical location or coverage, theme of the intervention**

The target groups of the intervention are staff members of MoE, their decentralized representations and delegations staff as well as representatives from private sector companies active in the energy sector. . The gender aspect will be duly taken into account when selecting candidates for training. Technical expertise will be required in MoE in Maputo while training will be organized both in Mozambique as well as abroad.

Training institutions shall be identified during the formulation phases of both this project and the scholarship programme funded under the same ICP. The formulation will determine whether and to which extent funding of more specific, targeted and advanced courses can be taken on board by the scholarships programme.

Beneficiaries will be all sector stakeholders in the energy sector, because sector organization and processes will improve which will facilitate the implementation of energy sector activities. Interactions with the private sector will equally be improved because energy sector staff will be better prepared to enter negotiations and plan, manage and monitor new energy sector projects, while private sector operators could benefit from a more conducive business environment.

#### **5. Relation of the intervention with PRSP and MDGs**

The Government of Mozambique has defined economic development and poverty reduction as the overarching objectives guiding government policy development and decision making which is also in line with the Millennium Development Goals and “Planos de Acção para Redução da Pobreza” (PARP). It has been acknowledged that development of the energy sector, and specifically electricity generation and access are a crucial element for economic development, because power is required to run industries, businesses, agricultural processing and hotels as well as health facilities, computers and communication tools. The first step is rational use of energy and to avoid excessive losses. Energy efficiency is therefore a key requirement for all economic development as well as for the provision of services in education, health or administration. While energy is not directly mentioned within the MDGs, it is nevertheless a crucial input into all of them. Therefore investment into the development of energy infrastructure, generation facilities and distribution networks will spur economic development as a consequence. However it will not be possible to make best use of financial and other resources if the necessary institutional and individual capacity of the sector institutions is not developed. In order to ensure that Mozambicans’ energy resources are developed in the most efficient and beneficial way and that electricity planning and access will

reach as many people as possible, it will be crucial to have trained and experienced staff and experts both in the public as well as in the local private sector. Equally in order to ensure successful implementation of the energy sector policy and strategy, that has as its vision to contribute effectively to the growth of the national economy and thereby improve the standard of living for the entire nation in a sustainable and environmentally sound manner, it will be crucial to build the required systems and capacity.

#### **6. Synergy with other bilateral and multilateral development partners, with the indicative programme of the European commission as well as with Belgium's national agenda for harmonisation and alignment.**

It has been acknowledged by all development partners active in the energy sector that capacity building is an important component of support to the Government of Mozambique. All donor funded interventions include a component of either technical assistance or training, while government institutions are also encouraged to include capacity building and knowledge transfer in all agreements signed with contractors or consultants who will have to train local staff on the job. The Norwegian bilateral aid agency is now implementing a technical cooperation project for developing and improving MoE capacity, both with equipment and trainers as technical assistance on strategic level. They will also assist with technical assistance for training in electricity generation, transmission and distribution aspects. Under the Energy Sector Projects of the World Bank and the European commission several short term international experts are recruited to support the sector planning and development, while specific support is given to the 'energy sector capacity building' by the energy sector donor group taskforce. The Norwegian Embassy and Agence Francaise de Développement (AFD) have indicated that within the next package of support specific funds will be allocated for capacity building in the Energy sector. All capacity building interventions will be aligned to the national priorities and programs and will be coordinated at the level of the Ministry of Energy. In the future an annual capacity building plan shall be developed in harmony with the budget cycle in which all required interventions will be captured and within which development partners can allocate funding to pre-defined activities.

#### **7. Maximum total amount of the Belgian contribution and indicative duration of the intervention**

The Budget allocated to the institutional strengthening and capacity building activities under the Belgian Cooperation is EUR 4 million. The detailed allocation of the resources was discussed above. Additional details may be provided if necessary. The duration of the intervention is 5 years, during which technical experts will be assisting in the energy sector and training programs will be organized so that the required structures are built by the time the intervention closes.

#### **8. Institutional measures taken to ensure durability of the intervention**

In order to ensure sustainability of the intervention, the MoE and the renewable energy sector donors will be involved in implementation and monitoring of the program for better alignment of the programs and avoiding duplication.

Engineers will be hired or allocated to work with all technical experts in order to ensure that knowledge is transferred and capacity developed among the local staff. This knowledge transfer will be a specific requirement in the Terms of Reference for the experts. Trainees attending academic or other training courses or participating in the industrial attachment program will have to sign contracts of commitment before leaving for training that will bind them to work for the energy sector for a period of at least three years after completion of the training or studies. This way it will be ensured that the knowledge gained will be used in the sector and other colleagues will also benefit from the newly acquired knowledge in the relevant departments. During the intervention, systems and processes will be established and developed, that will continue to exist even after the intervention from the Belgian Government comes to an end.