Enabel

Ministério dos Recursos Minerais e Energia

2019 Results Report

CB MIREME: Capacity Development of the Ministry of Mineral Resources and Energy (MIREME) and Autoridade Reguladora de Energia (ARENE) MOZ1403011, Mozambique

Belgian development agency

enabel.be

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1 Abbreviations

ARENE : Autoridade Reguladora de Energia

CB Capacity Building

CNELEC Conselho Nacional de Electricidade

DIPREME Provincial Directorate of Mineral Resources and Energy

DNE Direcção Nacional de Energia (MIREME)

DPC Direcção de Planificação e Cooperação (MIREME)

DRH Direcção Recursos Humanos (MIREME)

EDF European Development Fund

EDM Electricidade de Moçambique

ESWG Energy Sector Working Group

EU European Union

FUNAE Fundo de Energia

GDP Gross domestic product

GIS Geographic Information System

GIZ German Development Agency

GO General Objective

GoM Government of Mozambique

HCB Hidroeléctrica de Cahora Bassa

HDI Human Development Index

HPP Hydro Power Project / Plant

HR Human Resources

ICP Indicative Cooperation Programme

INE National Institute of Statistics (Instituto Nacional de Estatistica)

IPEME Instituto para Promoção das Pequenas e Médias Empresas, the institute of SMEs,

IPP Independent Power Producer

IVA Imposto sobre o valor acrescentado (VAT)

KfW Kreditanstalt für Wiederaufbau

KPI Key Performance Indicator

kV kilo Volt

kW kilo Watt

LPG Liquified Petroleum Gas

LV Low voltage

M&E Monitoring and Evaluation

MDGs Millennium Development Goals

MEF Ministry of Economy and Finance

MINEC Ministério dos Negocios Estrangeiros e Cooperaçao

MIREME Ministry of Mineral Resources and Energy

MOU Memorandum of Understanding

MW Mega Watt

NGO Non-governmental organization

O&M Operations & Maintenance

PARPA Plano de Acção Para a Redução da Pobreza Absoluta

PMU Project Management Unit

PV Photovoltaic

REFIT Renewable Energy Feed in Tariff

RERA Regional Electricity Regulators Association of Southern Africa

SADC Southern African Development Community

SAPP Southern African Power Pool

SC Steering Committee

SCA Specific Cooperation Agreement

SE4ALL Sustainable Energy for All

Sida Swedish International Development Agency

SME Small and medium size enterprise

SO Specific Objective

SWG Sector Working Group

SWOT Strengths, Weaknesses, Opportunities and Threats

TA Technical Assistant

TFF Technical and Financial File

ToR Terms of Reference

WB World Bank

2 Summary of the intervention

2.1 Intervention form

Title of the intervention	CB MIREME/ARENE : Capacity Development of the Ministry of Mineral Resources (MIREME) and Autoridade Reguladora de Energia (ARENE))
Code of the intervention	MOZ1403011
Location	Mozambique
Total budget	4,000,000.00
Partner institution	Ministry of Mineral Resources and Energy MIREME and Autoridade Reguladora de Energia (ARENE)
Start date of the Specific Agreement	19 April 2017
Start date of the intervention/ Opening steering committee	1 July 2017
Expected end date of execution	30 June 2022
End date of the Specific Agreement	19 April 2023
Target groups	Partners institutions involved in energy sector policies (MIREME and ARENE)
Impact1	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
Outcome	The performance of MIREME and CNELEC (now ARENE) in advancing access to renewable electricity in rural areas is enhanced
Outputs	R1: MIREME's capacities at the central level are strengthened to improve planning and policy-making in the energy sector
	R2: DIPREME's capacities are strengthened in order to improve the planning, coordination and M&E of the energy sector in the selected provinces (Zambezia, Sofala, Manica)
	R3: Capacities of ARENE are strengthened to become a strong and independent regulator able to regulate new and renewable off-grid electricity
Year covered by the report	2019

[1] Impact regards the general objective; outcomes regard the specific objective; output regards the expected result

2.2 Self-evaluation of performance

2.2.1 Relevance

	Performance
Relevance	A

In Mozambique, although official figures differ according to sources, less than 35 percent of the population has access to electricity, and this predominantly in urban areas. As much as 95 percent of the households use firewood or charcoal daily for cooking. It is estimated that only 10 per cent of households have access to solar energy in the form of solar pico- or home systems. The Mozambican government has endorsed the Sustainable Energy for All (SE4ALL) targets of Universal Energy Access by 2030, which intersects with the United Nations Sustainable Development Goals (e.g. SDG7) and the 2015 Paris Agreement on Climate Change. Projections show however that only 50 percent of the population can have access to the electricity grid by that year. There remains therefore a huge challenge and opportunity in connecting the remaining half through off-grid and renewable energy. The project's SWOT analysis of the Mozambican energy sector - which was further updated for the three provinces Sofala, Manica and Zambezia-, bears out a critical lack of quality data for coordinated sector planning of energy needs and supply, a legal, fiscal and regulatory environment which requires adaptation to accommodate renewable energy and independent power producers, and undercapacity in terms of quality staff and operational resources within MIREME and ARENE to respond to the new challenges of universal energy access. This is exacerbated by the long delay since 2017 in appointing a Chief Executive Officer for ARENE up to Q4 2019, which retained the new regulatory authority in limbo all this time. This project aims to strengthen the capacities in MIREME and ARENE to plan, manage, implement and monitor all activities for the energy sector, with a specific focus on renewable off-grid electricity, remain therefore very relevant.

2.2.2 Effectiveness

	Performance
Effectiveness	B

In 2019, a lot of effort has gone into preparing, identifying, formulating and finalizing the procurement of required external support services during the past year. Most of these external support services aim to contribute to the development of more systematic frameworks in the absence of guiding policies, strategies or manuals. Examples of such required external support services are a MIREME human resources development and retention strategy, a planning and M&E manual, additional temporary human resources for data management and analysis, an IT platform for centralized reporting, the provision of IT equipment both at central level and in the three focal provinces Sofala, Manica and Zambezia which were heavily affected by cyclones Idai and Kenneth early 2019, and a pilot showcase photovoltaic system to address persisting electricity constraints in the DIPREME Zambezia offices in Quelimane. Meanwhile, in the absence of a structured approach to planning and training, further ad-hoc capacity strengthening measures were implemented, such as specific training, planning meetings, workshops and exchange visits, as well as an active support to exercises of conceptual clarification and information

dissemination (e.g. introduction of the use of GIS in MIREME, sector planning, climate change preparedness, gender and productive use of renewable energy). Participation in ESWG and regular exchange with other donors e.g. GIZ, DFID, SNV, EU, GGGI as well as internal Enabel coordination (eg RERD2,…) and reflection is an ongoing activity of networking and strategic orientation of the project.

However, given the many uncertainties in the policy context and the fact that many of the identified outputs refer to the integrated design or systematization of existing or new practices (e.g. manuals or additional human resources), a regular updating of the project's intervention logic is required. This year has seen an intense investment in specifying the required interventions with a broad inclusion of various directorates, departments and units at central and provincial level. In some cases, this facilitating capacity strengthening approach has been able to nurture internal initiatives such as for instance a working group to prepare the introduction of GIS in Mireme, strengthening gender work in the energy sector, or the training of a group of staff members in a variety of relevant renewable energy courses. It has also reached its limits in certain instances, where externally sourced expertise is required to further elaborate the interventions such as for instance the design of a planning, M&E manual or the further buildup, consolidation and integration of provincial capacity in the three focal provinces. Many of these exercises are very much linked to the cycle of policy preparation and operationalisation, and need to sync with discussions and decisions outside of the sphere of influence of the project. A good illustration is defining the target value of renewable energy-powered connections during the project's life span, which is part of the internal operationalisation of general targets of the National Electrification Strategy. It is for this reason that identified critical milestone outputs in the baseline exercise require an annual stocktaking and further elaboration. Such a reflection and discussion also contributes to further capacity strengthening in terms of strategic and technical planning and coordination among various stakeholders. This should provide a regular check on the up-to-date relevance and effectiveness of the intervention. Such stocktaking at the end of 2019 has made it for instance necessary to propose a number of new interventions such as training evaluation formats, training of trainer courses and the vulgarization of information on renewable energy and productive use for the rural population.

2.2.3 Efficiency

	Performance
Efficiency	B

While the need to gather better technical information or follow extensive administrative procedures have contributed to the later implementation of certain interventions such as for instance the deployment of temporary supporting statistical staff or of the CEO of Arene, or the securing of IT and PV equipment, political priorities and uncertainty before and after elections have also contributed to delays. The clearest example is the parliamentary discussion of important enabling legislation for the renewable energy sector. A general hierarchical and formalistic government setup also requires more time for decisions to be taken or to be monitored than originally assumed in the coordination project's logic. However, increasingly successful attempts have been made by the partners to avoid such delays by means of informal working groups, internal meetings and consultation and communication with various other stakeholders involved at central and provincial level. The coordination with RERD2, the availability of junior experts, and the increased usage of Mireme staff for administration, preparation and implementation of

activities has also aided in this respect. Therefore, while budgetary efficiency is quite well pursued, provincial outreach and time efficiency require urgent attention for the next years as the project has now reached cruising speed.

2.2.4 Potential sustainability

	Performance
Potential sustainability	B

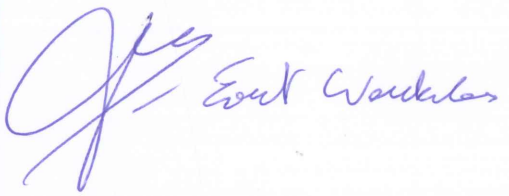
This capacity strengthening project aims to create enabling conditions for MIREME and ARENE to better plan, manage, implement and monitor all electricity sector activities. Specific attention goes out to strengthening the capacity of both partners to integrate and promote the use of renewable off-grid electricity in achieving sustainable access to energy for all by 2030 (Sustainable Energy for All (SE4ALL) targets).

It is clear however that in the short term, the potential sustainability of this particular CB MIREME project intervention is located especially at the institutional, organizational and staff levels, and not as much at the financial level. In the short term, the project aims to improve the institutional and staff capacity to better plan, manage, implement and monitor all electricity sector activities, with a specific focus on renewable off-grid electricity. This is intended to contribute in the longer term to increased income from connections and tariffs, and an improved donor commitment to the Electrification Account of Mozambique's National Electrification Strategy to secure energy access for all by 2030. However, this depends on an improvement of the macro-economic situation of the country (e.g. solution to hidden debts), the involvement of private sector operators, the affordability and/or subsidization of electricity, and especially the actual planning, supervision and regulation by MIREME and ARENE. With the increasing interest form both international aid agencies as well as international energy companies, such institutional, organizational and staff capacities become very critical in assuring sustainability. An important concern remains however the lack of incentives in the public sector both at central or provincial level to go the extra mile in vision and implementation.

2.2.5 Conclusions

- This second year the project has come to a cruising speed in most aspects, but has been hindered by certain inefficiencies in the timely execution of certain interventions, due to factors of internal setup as well as external risks.
- Institutional capacity strengthening requires trust, transparency, flexibility and a systematic approach of cooperation between partners. This takes time.
- Annual exercise of M&E stocktaking and updating is important as many interventions are critical milestones to achieve subsequent outputs, and contributes as such to further capacity strengthening among various stakeholders. This is also reflected in an increased potential sustainability score at the institutional level.
- The formulation of indicator base and target values at higher outcome level is dependent on the policy process' cycles and progress.

- Gradually, more emphasis has been put on the provincial-central level interaction in the interventions. However, the project's organizational setup of coverage of the three provinces of Zambezia, Manica and Sofala provinces require a more efficient management approach. Such approach should go beyond the present emphasis on Zambezia as well as disaster alleviation funding.
- The availability of skilled Junior Experts as well as temporary additional human resources can make a great difference in terms of hands-on support activities in sector planning (national or district) and GIS
- The channels of vulgarization, strengthening of gender focal points and trainer of trainers-skills may address some of these identified inefficiencies.
- There is an urgent need to promote and regulate renewable off-grid electricity systematically aligned to National Electrification Strategy 2018. Results from local piloting initiatives such as RERD2 may feed into this.
- The preparatory support to ARENE thus far now needs to be turned into actual formulation, piloting and implementation of regulatory instruments.

National execution officer	Intervention Manager Enabel
	 Evert WAETERLOOS

3 Monitoring of results[2]

3.1 Evolution of the context

3.1.1 General and institutional context

In very general terms, Mozambique of 2019 is still characterized by austerity, a 26% drop in foreign direct investments and the so-called 'hidden debts' crisis that have edged the country into disrepute on the international scene. Mozambique is the latest country to fall victim to the phenomenon of 'presource curse' – when a country's economy is derailed not by resource exports, but the mere prospect of them. It took out more than $2 billion in secret loans in 2013 and 2014 on the assumption they would be easy to repay once gas revenues from its giant projects started flowing. Not only do these evolutions impact on the degree of cooperation between GoM and the donors. It also has direct knock-on effects on the economic resilience of the country and its populace. Government's scrapping of subsidies on fuel and wheat for instance increases living costs for the poorest people still further, especially in the food and energy sector. It has also affected the public sector where a freeze on recruitment, wages and travel has been initiated.

In 2019 the newly appointed Ministry of Mineral Resources and Energy MIREME Minister M.Tovela consolidated his tenure amongst an increased pressure on closing lucrative gas and oil deals with international companies. Directorates and teams need(ed) time to find their new role and coordination mechanisms. At the same time new policies and legislations were developed and (are about to be) approved. However, given the political uncertainties surrounding the presidential elections and installation of a new government in early 2020, the last quarter of 2019 did not allow significant decisions to be taken. This has affected the definition and alignment of higher-level indicators in the outcome sphere and certain outputs.

The Law on the National Energy Regulatory Authority ARENE (the successor the National Electricity Council – CNELEC) is in force since December 2017. ARENE is responsible for the supervision, regulation, representation, taxation and sanctioning of the production, transport, distribution, commercialization and storage of electricity. However, the appointment of a new CEO was left until the end of 2019 to be announced, which affected the operationality of the new regulator significantly.

Review of Electricity Law

The present proposal for a new Electricity Law (to replace the 1997 law) aims to promote the efficiency of the electricity sector in accordance with internal, regional and international markets and includes, among others, encouraging participation of the private sector and redefinition of the role of FUNAE. However, due to political dynamics the discussion of the said proposal has been delayed until the next Parliament is in session in 2020. This is a critical factor in creating a limbo in the institutional and regulatory environment of renewable energy for rural areas, and creates a lot of uncertainty in the orientation of the capacity strengthening project.

Meanwhile, from government side, improved coordination committees are being set up, while the setting up of a donor-funded EU Resource Centre has seen more focused ESWG

[2] 'Results' means 'development results'; Impact regards the general objective; outcomes regard the specific objective; output regards the expected result; intermediate outcomes regard changes resulting from the achievement of the outputs allowing progress towards the outcome of the intervention, at a higher level.

meetings taking place. For instance, in December 2019, joint policy concerns were presented to the Minister as follows:

- A sound updated legal and regulatory framework, including the adoption of a new electricity law.
- Reduction of import taxes for renewable energy equipment
- Capacity-building of MIREME so that it can fully play its role
- ARENE as an independent, technical and professional institution on the energy market
- Continue the reform of EDM,
- Transparency in procurement.

In addition, two ESWG subgroups – one on private sector and another on Governance technical assistance and their ToRs are being prepared.

However, the capacity in Mireme to coordinate international collaboration and development cooperation funds requires more technical know-how and staff. Similarly, the evolution in the harmo-context has suffered from a lack of inclusive participation of donors such as Belgium in the policy and political discussions, dominated by big players such as World Bank, Norway and EU. This does not stand in the way however of Enabel participating in ESWG and regular exchange with other donors e.g. GIZ, DFID, SNV, EU, GGGI as well as internal Enabel coordination (e.g. RERD2,…) and reflection as an ongoing activity of networking and strategic orientation of the project.

3.1.2 Management context

3.1.2.1 Partnership modalities

In general, the modality of Regie proves to allow for a fairly fast and transparent identification of interventions, launching of tenders and flow of resources. The downside is lack of familiarity of Mozambican public and private actors with Belgian legislation pertaining to tenders, a distant attitude of MIREME and ARENE as far as reporting and financial management is concerned, as well avoidable delays (of up to 6 months) for the delivery of IT equipment under framework conditions and even then at a high cost due to repeated wrong shipping and activation instructions.

In 2019, a lot of effort has gone into preparing, identifying, formulating and finalizing the procurement of required external support services during the past year with a strong involvement of both partners in the preparation and selection processes. Most of these external support services aim to contribute to the development of more systematic frameworks in the absence of guiding policies, strategies or manuals. Examples of such required external support services are a MIREME human resources development and retention strategy, a planning and M&E manual, additional temporary human resources for data management and analysis, an IT platform for centralized reporting, the provision of IT equipment both at central level and in the three focal provinces Sofala, Manica and Zambezia which were heavily affected by cyclones Idai and Kenneth early 2019, and a pilot showcase photovoltaic system to address persisting electricity constraints in the DIPREME Zambezia offices in Quelimane. The need to gather better technical information or follow extensive administrative procedures have contributed to the later granting of contracts such as the securing of IT and PV equipment.

3.1.2.2 Operational modalities

A general hierarchical and formalistic government setup also requires more time for official decisions to be taken or to be monitored than originally assumed in the project's logic. However, increasingly successful attempts have been made by the partners to avoid such delays by means of informal working groups, internal meetings and consultation and communication with various other stakeholders involved at central and provincial level, as well as prior to and after the Steering Committee sessions.

Gradually, more emphasis has been put on the provincial-central level interaction in the interventions. However, the project's organizational setup of coverage of the three provinces of Zambezia, Manica and Sofala provinces require a more efficient management approach. Such approach should go beyond the present emphasis on Zambezia or occasional disaster alleviation funding.

3.2 Performance of outcome

This part reports about progress made in achieving the outcome targeted by the intervention (specific objective) in view of contributing to the impact (general objective). Progress made in achieving the outcome taking into account the intermediate results (intermediate outcomes) as well as the use of results (outputs).

3.2.1 Progress of indicators[3]

Outcome[4]:					
Progress indicators/ markers[5] : MOZ1403011	**Base value**	**Value preceding year**	**Value reporting year**	**Target reporting year**	**Final target**
1 -Activity implementation mireme+arene	**TBC**	**TBC**	**TBC**	**TBC**	<=70%
2.- Connections under national electrification programme	**TBC**	**28%**	**32%**	**TBC**	90% of 785,206 connections planned for 2020
3 Connections renewable offgrid electricity under national electrification programme	**TBC**	**TBC**	**TBC**	**TBC**	90% of 785,206 connections planned for 2020

[3] *You may use the table given or replace it with your own monitoring matrix format. Add/delete columns in function of the context (certain interventions will have to add columns for preceding years while – new – interventions will not have values for the preceding year).*
[4] *Use the formulation of the outcome as mentioned in the logical framework (TFF).*
[5] *Use the indicators given in the logical framework (of the TFF or of the last version of the logical framework).*

4. Priority regulatory instruments for renewable off-grid electricity published	**0**	**0**	**0**	**0**	**50%**
5. M&E Pilot regulatory instruments renewable off-grid electricity	**0**	**0**	**0**	**0**	**70%**
6. Dissemination information on renewable energy to rural areas	**0**	**2%**	**5%**	**0**	>=60%

3.2.2 Analysis of progress made

No outcome indicators were formulated for 2019, as in 2018 and 2019 official sources did not yet consolidate the target values for the electrification and renewable energy targets, pending the ongoing exercise of formulation of the new 5-year plan 2020-2024. It is however clear that some of the critical intended indicators depend entirely on the fluctuating policy context such as for instance the legislation and regulation around connections through renewable decentralised off-grid sources. The objective is to get in 2020 more clarity on indicators expressed in the new governmental 5-year plan 2020-2024 once this is launched by the new government in Q1 2020. The exercise of designing a Planning, Monitoring and Evaluation manual is geared towards this.

Other activity-linked indicators relating to for instance dissemination information on renewable energy to rural areas need further elaboration in 2020, now that this has been acknowledged within the project team in late 2019 as an important activity.

3.3 Performance of output 1[6]

MIREME's capacities at the central level are strengthened to improve planning and policy-making in the energy sector	***Indicator Baseline Value***	***2018***	***2019***		***2022***
		Indicator Actual Value	***Indicator Target Value***	***Indicator Actual Value***	***Indicator Target Value***
MOZ1403011 Annual realization rate of planned activities	*0*	*TBC*	*TBC*	*TBC*	*90*
MOZ1403011 Approved off-grid regulatory instruments	*0*				*3*

[6] *The template provides for up to 3 outputs (chapters 2.2, 2.3 and 2.4). In case the intervention has more outputs, simply copy paste. In case the intervention has fewer than 3 outputs, simply delete the superfluous chapter(s).*
For the outcome level you may also replace this table by the intervention's own format (e.g. your operational monitoring tool).

MOZ1403011 Data Management Platform	*0*	*0*	*1*	*0*	*1*
MOZ1403011 HR Development Plan			*1*	*0*	*1*
MOZ1403011 HR M&E System			*1*	*0*	*1*
MOZ1403011 Number and types of training delivered			*TBC*	*25*	*TBC*
MOZ1403011 Priority off-grid regulatory instruments developed	*0*			*0*	*50*
MOZ1403011 Staff Retention	*20*			*TBC*	*5*
MOZ1403011Manual of Planning, Monitoring and Evaluation	*0*		*1*	*0*	
MOZ1403011MethodologyChapter	*0*		*1*	*0*	
MOZ1403011NRE information dissemination	*0*			*25*	*80*
MOZ1403011Quality annual plans	*0*		*0*	*0*	*3*
MOZ1403011Quality Quarterly Reports	*0*			*0*	*7*

3.3.1 State of progress of the main activities

State of progress of the main activities[7]	State of progress The activities are:			
	Ahead of time	Within deadline	Delayed[8]	Seriously delayed[9]
1 Contracting of max.5 statistical technicians (central and provincial)		X		
2 Workshop of discussion and harmonization with all stakeholders of the Annual Plans	X			
3 Compilation of a Planning and M&E Manual			X	
4 Develop and establish Fit-for-purpose IT platform for centralised reporting and information management			X	

[8] The activities are delayed; corrective measures must be taken.

[9] The activities are more than 6 months behind schedule. Major corrective measures are required.

5 IT equipment is available			X	
6. Survey on specific information needs on renewable energy for consumers, producers and investors in rural areas		X		
7. Production and dissemination of specific information on renewable energy for consumers, producers and investors in rural areas.	X			
8. Elaborate improved HR Development Plan - including retention plan and digitalised system to follow up on the quality, relevance and the effect of trainings		X		
9. Coordinated supply of training within MIREME and with donors		X		
10. Workshop with the stakeholders to identify the regulatory instruments that need to be developed as a matter of priority				x
11. Field trips to the region to exchange experience with other energy ministries, regulators and off-grid energy actors		X		

3.3.2 Analysis of progress made

The most important progress of 2019 in this Result Area was made in the following areas and activities:

- The update exercise of logical and M&E framework was further refined in March 2019 with the help of consultants from MDF. Taking into account the recommendations and inputs from this, the Baseline report was submitted in 2019, after an update upon the introduction of Pilot – which created some conflated information in the LOGFRAME.
- Sector planning: a literature review on the principles and methodologies of sector planning in the energy sector undertaken by JE is being developed as an internal learning and discussion tool in Mireme by Q2 2020.
- Workshop on "Integrated Planning and Simplified Information models for the production of statistical information in the energy sector", Maputo 20-21June 2019: provides an orientation for better integration by Mireme of energy information, and a preparation to specifying the requirements of the foreseen manual for improved planning, M&E, awaiting the publication of the new 5 year governmental plan 20-24
- The DPC database on donor interventions to be used for increased coordination capacity within MIREME was further elaborated with assistance from the JE. Updates will be done in 2020
- Elaboration of a Human Resources Development Plan and Retention Strategy: tender launched October 2019 and granted in December 2019. Start foreseen Q1 2020

- Additional temporary human resources (statisticians) for data management and analysis in MIREME: selection completed 23 December 2019; start deployment foreseen Q1 2020
- Study visit to Zambia's Energy Regulation Board in the context of preparation of Arene to become fully operational and for Mireme's staff of DPC and DNE to be provided exposure to other regulatory work in the region
- Training in Q4: Training of 13 Mireme and DIPREME Zambezia, Sofala and Manica staff in Energy Sector Reform and regulation (1); Distribution operation and management Minigrid (1); GIS and rural electrification planning (5); Management of Human Resources in Minigrid projects (2); Introduction to solar P.V & off grid P.V. (2); Regulatory issues in Minigrid projects (2); co-sponsored participation of MIREME staff in the General Assembly meetings of Irena; GIS introduction training for technical work group on introduction of GIS in MIREME (29-30 October 2019); training of MIREME's gender and HIV/AIDS focal points in view of elaboration of Gender Strategy for MIREME (2-3 September 2019); Exchange and peer training of MIREME's gender focal points on productive use of renewable energy in Manica province (28-29 November 2019) and divulgation fair for rural population;
- Provision of IT equipment for key units and staff members MIREME
- Regulatory instruments for renewable off-grid electricity: workshop foreseen for end of November 2019 delayed due to delayed appointment of ARENE CEO.
- Regulatory framework for renewable off-grid electricity: literature review was prepared by an Enabel stagiaire (end of July 2019), and needs to be finalized for the workshop on regulatory instruments for renewable off-grid electricity, postponed to 2020
- IT platform for Mireme countrywide; tender launched in Q4 2019, granting foreseen in Q1 2020
- Production and dissemination of specific information on renewable energy for consumers, producers and investors in rural areas for the Manica Event of 28-29 November 2019. More emphasis will go into improving the relevance, form and supply of such information in 2020.
- Preparation of possible climate fund project proposals from a water-food-energy nexus perspective, to be finalized in Q1 2020.

3.4 Performance of output 2[10]

[10] *The template provides for up to 3 outputs (chapters 2.2, 2.3 and 2.4). In case the intervention has more outputs, simply copy paste. In case the intervention has fewer than 3 outputs, simply delete the superfluous chapter(s).*
For the outcome level you may also replace this table by the intervention's own format (e.g. your operational monitoring tool).

3.4.1 Progress of indicators

This table automatically uses the summary of output-level indicators updated in Pilot.

DIPREME's capacities are strengthened in order to improve the planning, coordination and M&E of the energy sector in the selected provinces (Zambezia, Sofala, Manica)	***Indicator Baseline Value***	***2018***	***2019***		***2022***
		Indicator Actual Value	***Indicator Target Value***	***Indicator Actual Value***	***Indicator Target Value***
MOZ1403011 DIPREME STAFF RETENTION	*0*			*TBC*	*5*
MOZ1403011 HR DEVELOPMENT PLAN IMPLEMENTATION DIPREME	*0*		*0*	*0*	*TBC*
MOZ1403011 HR M&E SYSTEM DIPREME			*1*	*0*	*1*
MOZ1403011 NRE INFORMATION DISSEMINATION DIPREME			*0*	*25*	*80*
MOZ1403011 Quality Plans DIPREME-MIREME	*0*				*70*
MOZ1403011 QUALITY QUARTERLY REPORTS DIPREME-MIREME	*0*		*80*	*0*	*80*
MOZ1403011 REALIZATION RATE ANNUAL PLAN DIPREME			*0*	*TBC*	*90*
MOZ1403011 TRAINING DELIVERED DIPREME			*0*	*25*	*TBC*

3.4.2 State of progress of the main activities

State of progress of the main activities[11]	State of progress The activities are:			
	Ahead of time	Within deadline	Delayed[12]	Seriously delayed[13]
1 Training of provincial personnel of the Statistical Plan in planning methodologies and M&E			X	
2 IT Equipment is available			X	
3 Dissemination of specific information on renewable energy to rural areas for consumers, producers and investors.	X			
4 Pilots in quarterly and other reports in Zambezia, Sofala, Manica		X		
5 Improved HR working conditions in energy sector units of DIPREME, including demonstration PV systems for office use				X
6. Coordinated training supply		X		

3.4.3 Analysis of progress made

- Improved information management, learning and reporting: sponsoring of participation of DIPREME technicians in regular RERD2 field missions in Zambezia
- SWOT Analysis DIPREME Zambezia, Sofala, Manica (Q2 2019) and Provincial Workshop project planning 3-5 July 2019 in Quelimane to promote the communication and discussion of recent sector evolutions from central level and to refine the project's interventions at provincial level.
- Discussion and preparation to systematic introduction to GIS in DIPREMEZ through Junior Expert during September field mission
- The tenderers for replacement of IT equipment requested by the DIPREMEs of Manica and Sofala as rehabilitation support after Cyclone Idai and Kenneth were selected in December 2019. Supply will take place in Q1 2020.
- Tenderer for DIPREME Zambezia's PV installation to supplement the grid electricity for use of computers and air-conditioning has taken a collaborative effort from CB Mireme and RERD2, and was selected in December 2019. Start foreseen Q1 2020
- Training in renewable energy for relevant DIPREME staff members in GIS and rural electrification planning as well as Introduction to solar P.V & off grid P.V in Q4 2019.
- Proposed concept notes by provincial ITA on promotion of anchor loads and indicators for district sector planning require final refining in Q1 2020

[12] The activities are delayed; corrective measures must be taken.

[13] The activities are more than 6 months behind schedule. Major corrective measures are required.

3.5 Performance of output 3[14]

3.5.1 Progress of indicators

Capacities of ARENE are strengthened to become a strong and independent regulator able to regulate new and renewable off-grid electricity	***Indicator Baseline Value***	***2018***	***2019***		***2022***
		Indicator Actual Value	***Indicator Target Value***	***Indicator Actual Value***	***Indicator Target Value***
MOZ1403011 HR FRAMEWORK DEVELOPED	*0*	*0*	*1*	*0*	*1*
MOZ1403011 HR FRAMEWORK APPROVED	*0*	*0*	*1*	*0*	*1*
MOZ1403011 HR FRAMEWORK TRAINING IMPLEMENTATION	*0*	*0*	*0*	*35%*	*100% of the target value (at least 50% of staff)*
MOZ1403011 PRIORITY REGULATORY INSTRUMENTS OFF-GRID NRE DEVELOPED	*0*		*0*	*0*	*50*
MOZ1403011 PRIORITY REGULATORY INSTRUMENTS OFF-GRID NRE APPROVED	*0*		*0*	*0*	*50*

[14] *The template provides for up to 3 outputs (chapters 2.2, 2.3 and 2.4). In case the intervention has more outputs, simply copy paste. In case the intervention has fewer than 3 outputs, simply delete the superfluous chapter(s).*
For the outcome level you may also replace this table by the intervention's own format (e.g. your operational monitoring tool).

3.5.2 State of progress of the main activities

State of progress of the main activities15	State of progress The activities are:			
	Ahead of time	Within deadline	Delayed[16]	Seriously delayed[17]
1 Workshop with the stakeholders to identify the regulatory instruments that need to be developed as a matter of priority				X
2 Field trips to the region to exchange experience with other regulatory authorities and off-grid electricity actors		X		
3 Consultants elaborate regulatory instruments				X
4 Internationally benchmarked human resources framework of professional qualifications, management functions and staffing levels for priority tasks for the next 5 years is elaborated			X	
5 Coordinated supply of training within ARENE and with donors		X		

3.5.3 Analysis of progress made

- In general, ARENE's operations were stalled as from Q2 2019 due to delayed appointment of CEO (only took place in Q4 2019)
- Human Resources and functions design: final version of consultancy report was finally submitted to Minister in Q3 2019 and preparations are made for dissemination in 2020
- Regulatory instruments for renewable off-grid electricity: workshop foreseen for end of November 2019 delayed due to delayed appointment of ARENE CEO.
- Training: participation of 3 Arene staff in ERRA training 19-21 June 2019 in Budapest on renewable energy auctions
- Regulatory framework literature review: stagiaire worked on this
- Study visit Zambia 19-23 August 2019: 4 Arene delegates participated in this exchange and study visit to the Energy Regulation Board of Zambia
- Provision of IT equipment for key staff members

[16] The activities are delayed; corrective measures must be taken.

[17] The activities are more than 6 months behind schedule. Major corrective measures are required.

4 Budget monitoring

	Budget	Expenditure		Balance	Disburse-ment rate at the end of year n	Planning					
		Previous years	Year covered by report (n)			2020		2021		2022	
		2017/2018	2019				%		%		%
Output 1	1,505,000.00	182,641.75	109,075.93	1,213,282.32	19.38%	649,000.00	43%	253,076.71	17%	122,283.39	8%
Output 2	955,000.00	101,648.84	198,383.76	654,967.40	31.42%	508,000.00	53%	169,000.00	18%	100,000.00	10%
Output 3	230,000.00	69,030.96	34,729.74	126,239.30	45.11%	116,200.00	51%	116,604.31	51%	44,692.88	19%
IVA		3,661.62	-	-							
Reserve	90,000.00	-	-	-			0%		0%	1,970.56	2%
General Means	1,220,000.00	289,262.63	147,661.02	783,076.35	35.81%	195,407.00	16%	187,710.46	15%	399,958.44	33%
TOTAL	4,000,000.00	646,245.80	489,850.45	2,863,903.75	28.40%	1,468,607.00	37%	726,391.48	18%	668,905.27	17%

5 Risks and Issues

No new major risks have been identified in the course of the reporting period.

6 Synergies and complementarities

6.1 With other interventions of the Portfolio

- The coordination with RERD2 is on a daily basis
- The Steering Committee is a joint event
- The deployment of provincial ITA and junior expert as well as admin and financial staff is shared;
- All the above allows the participation of DIPREMEZ staff in the RERD2 field missions, technical screening of tender PV installation by Enabel, CB Mireme, FUNAE and RERD2 staff, information exchange on GIS in both Funae and Mireme, participation in the ESWG....
- There is an urgent need to promote and regulate renewable off-grid electricity systematically aligned to National Electrification Strategy 2018. Results from local piloting initiatives such as RERD2 may feed into this.
- The (foreseen) support to vulgarization, strengthening of gender focal points and trainer of trainers-skills may also inform and benefit RERD2 and other projects (e.g. Clismadev).

- Participation in ESWG and regular exchange with other donors e.g. GIZ, DFID, SNV, EU, GGGI as well as internal Enabel coordination (e.g. RERD2,…) and reflection is an ongoing activity of networking and strategic orientation of the project
- Gradually, more emphasis has been put on the provincial-central level interaction in the interventions. However, the project's organizational setup of coverage of the three provinces of Zambezia, Manica and Sofala provinces require a more efficient management approach. Such approach should go beyond the present emphasis on Zambezia as well as disaster alleviation funding.

6.2 With third-party assignments

- Discussions have taken place with GGGI to broker the replication and implementation of feasibility studies on solar irrigation in Mozambique through for instance GCF or Study Fund
- The need to address one of the poverty related climate change challenges in Mozambique - the extensive use of biomass and charcoal which is associated with considerable environmental costs - has been taken up by the ITA for further project formulation. In Q1 2020 a final project identification concept of greening the charcoal value chain will be introduced for financing and further elaboration into a project formulation.

6.3 Other synergies and complementarities

- • Communication on the complexities of development work and sustainable development goals through blogs on Open. Enabel, LinkedIn as well as Diplomatic Bureau of Maputo's Facebook site
- • Drafting of an MoU for institutional collaboration between Arene and CREG

7 Transversal themes

7.1 Environment and climate change

Environment is not considered as a cross-cutting theme but rather as a strategic orientation of the intervention, given the strong focus on new and renewable energies. As much as 95 percent of Mozambique's households use firewood or charcoal daily for cooking. The greenhouse gas emissions associated with the production and consumption of charcoal are high and projected to grow further. The main sources of non-electric light on the other hand are torches, firewood and kerosene. It is estimated that only 10 per cent of households have access to solar energy in the form of solar pico- or home systems. The promotion of renewable energy for decentralised off-grid electricity production in this project contributes to climate change mitigation and adaptation as co-benefits in this development intervention.

7.2 Gender

Women represent 52% of the population of Mozambique and 72.2% of them live in rural areas. Focusing on rural electrification will benefit women and contribute to the removal of gender inequality, reducing the use of wood for cooking which requires longer journeys of women, who are left with less time to be able to perform other activities. The strategy to give priority to increasing access to modern energy and the expansion of rural electrification seeks to mitigate these effects. In Mozambique, examples of productive uses of energy are irrigation, electrical sewing, installation of fridges/freezers, electronical welding, improved ovens … The latter wood or charcoal-saving stoves/ovens are important, as around 80 percent of the population uses biomass such as wood or charcoal daily for cooking. The link between gender equity and energy transpires clearly in these domestic uses of energy.

Challenges in gender mainstreaming persist throughout this capacity building project such as:

- Emphasis on developing infrastructure without sufficient attention to community applications, users' needs and potential productive uses: energy as an end in itself;
- Implementation requires appropriate capacity at lower levels in national, provincial, district and local offices.
- Women are under-represented in the energy sector, especially in technical areas and at decision making levels.
- Access to formal finance institutions is often biased against women with lower education levels and asset accumulation.

The project's objective to improve the methodology of data gathering, analysis and reporting also implies more attention to data on gendered energy use and to inform policy and gender disaggregation in all statistics, data collection and analysis, including in the indicators of the comprehensive baseline and of the M&E framework.

Experience with strengthening the capacity of the Mireme gender focal points towards developing a Mireme Gender Strategy and organising information dissemination at the provincial level have revealed the challenges to distribute the right type of information. It is one thing to propose a new practice, but another one to have it accepted. Electrification is a first step, often strongly desired by the communities. But bringing only energy is not enough to promote sustainable development; it is important to also have the devices and applications available to transform these new sources of energy into new sources of income and wellbeing for the entire community. An appropriate gender perspective is critical in this. It is for this reason that next year more emphasis needs to go to focused backstopping and consultancy on gender mainstreaming and development of appropriate communication materials and channels.

7.3 Digitisation

- Elaboration of a Human Resources Development Plan and Retention Strategy: includes the operation of a digitalized system of M&E of staff development and training
- Additional temporary human resources (statisticians) for data management and analysis in MIREME
- Training in GIS
- IT platform for centralised and digitalised reporting

7.4 Decent work

See gender paragraph above.

In the proposals around greening the charcoal value chain, more attention will go out to opportunities for employment creation through local manufacturers and suppliers as well as TVET.

8 Lessons learned

8.1 The successes

- In 2019, a lot of effort has gone into preparing, negotiating and finalizing various public tenders as well as identifying specific training interventions. This has required a lot of strategic clarification, consultation and concertation with the various project team members. This has improved both the team dynamics in general as well as the project's reputation within and outside of the governmental partners.
- This year has seen an intense investment in specifying the required interventions with a broad inclusion of various directorates, departments and units at central and provincial level.
- This has culminated amongst others in the finalisation of the Baseline Report, which requires however further clarification of officially approved indicators for the period 2020-24
- This has also opened up some important and urgent avenues for improved project relevance and sustainability: introduce Training of Training components for staff to be able to disseminate the new knowledge, vulgarization of material on renewable energy and productive use for rural population, provincial energy fairs, …
- The coaching of JE has been very effective and satisfactory in terms of introducing concepts of energy sector planning and productive use within Mireme. Another JE is also very desirable for vulgarization.
- Importance of communicating on the complexities of development work and sustainable development goals through blogs
- Networking with various other donors
- Intensified coordination with RERD2

- Ability and flexibility to respond to the need for replacement of IT equipment in the focal provinces Sofala and Manica which were heavily affected by cyclones Idai and Kenneth early 2019
- Opportunity to install a pilot showcase photovoltaic system to address persisting electricity constraints in the DIPREME Zambezia offices in Quelimane.
- In addition, further ad-hoc capacity strengthening measures were implemented, such as specific trainings, planning meetings, workshops and exchange visits, as well as an active support to exercises of conceptual clarification and information dissemination (e.g. introduction of the use of GIS in MIREME, sector planning, climate change preparedness, gender and productive use of renewable energy).
- Participation in ESWG and regular exchange with other donors e.g. GIZ, DFID, SNV, EU, GGGI as well as internal Enabel coordination (e.g. RERD2,…) and reflection is an ongoing activity of networking and strategic orientation of the project.

8.2 The Challenges

- This second year the project has come to a cruising speed in most aspects, but has been hindered by certain structural inefficiencies in the timely execution of certain interventions, both due to factors of internal setup as well as external risks.
- Institutional capacity strengthening requires time, transparency and flexibility and a systematic approach of cooperation between partners.
- There remains a difficulty in formulating detailed outcome targets at policy level, as little formally confirmed information is circulated and within the government machinery no other indicators can be agreed upon. Part of the project's contribution through for instance reporting system and a manual for planning, M&E aim exactly to promote the process of clarifying and agreeing on such targets. Therefore, the concept of quantitative results-based project management M&E applies difficultly to this particular intervention.
- There is an urgent need to promote and regulate renewable off-grid electricity systematically aligned to National Electrification Strategy 2018. Results from local piloting initiatives such as RERD2 may feed into this.
- The support to ARENE thus far has been stalled due to the non-appointment of a new CEO. With the new CEO in place since Q4 2019, the preparatory support provided by Enabel now needs to be turned into actual formulation, piloting and implementation of regulatory instruments
- Difficulties in getting provincial work focused, visible and value-added and need to be addressed organizationally.
- An important concern remains the lack of incentives in the public sector both at central or provincial level to go the extra mile in vision and implementation.
- The need to address one of the poverty and climate change related challenges in the energy sector in Mozambique - the extensive use of biomass and charcoal which is associated with considerable environmental costs - has been taken up for further project formulation. In Q1 2020 a final project identification concept for greening of the charcoal value chain in the Zambezi River Basin will be introduced for financing and further elaboration into a project formulation.

8.3 Strategic learning questions

- Given the many uncertainties in the policy context and the fact that many of the identified outputs refer to the integrated design or systematization of existing or new practices (e.g. manuals or additional human resources), a regular updating of the project's intervention logic is required.
- Such annual exercises of M&E stocktaking and updating contribute to further capacity strengthening in Mireme and Arene.
- Arene's task are huge. A proper sequencing of support needs to be coordinated with various donors.
- The project's organizational setup of coverage of the three provinces of Zambezia, Manica and Sofala requires a more efficient management approach. Such approach should go beyond the present emphasis on Zambezia.
- The channels of vulgarization, strengthening of gender focal points and trainer of trainers-skills may address some of the identified inefficiencies in disseminating appropriate information on renewable energy for productive use among government actors and rural dwellers. Further investment in methodology and product development is required.
- Coordination between Mireme and ESWG as well as within ESWG requires more time and information resources in terms of identification of strategic collaboration proposals, information sharing and program alignment.

8.4 Summary of lessons learned

The summary of lessons learned is given in the table as well as the potentially interested target group by the lessons learned.

Lessons learned	Target group
• The need to elaborate a systematic cooperation approach in institutional capacity strengthening and anchoring requires involvement, ownership, trust, and room for optimisation, especially at central level. This takes time and flexibility.	• Enabel HQ
• Provincial outreach needs to become more planned, systematic and visible	• MIREME and Enabel
• Urgent need to promote and regulate renewable off-grid electricity systematically aligned to National Electrification Strategy 2018	• MIREME and ESWG
• Coordination between Mireme and ESWG as well as within ESWG requires more time and information resources, as the sector is characterized by many players and interests	• ESWG, Enabel, Mireme, Arene

• Starting 2020, a substantial effort in communication and training on what renewable energy can mean for rural development and gender equity is required.	• Government staff at central, provincial and local level. • Rural consumers and producers
• Junior Experts can quickly make very effective contributions. A new JE is required for in vulgarization on what renewable energy can mean for rural development and gender equity	• Enabel, Mireme, DIPREME

9 Steering

9.1 Changes made to the intervention

None

9.2 Decisions taken by the Steering and monitoring committee

Decision/Action Code	Intervention Decision / Action Code	Intervention Decision Source	Intervention Decision Date	Intervention Decision Action Status
D01	Approval of the Financial and Technical File (TFF) of the project			
D01/A01	Validation of the project document (TFF)	Steering Committee	12/08/2017	Completed
D01/A02	CCQ meeting	Steering Committee	12/08/2017	Completed
D01/A03	Exchange of letters - Specific agreement	Steering Committee	12/08/2017	Completed
D02	Composition and management of Joint Steering Committee			
D02/A04	Directors of Direcção de Planificação e Cooperação and of Direcção Nacional de Energias Novas e Renováveis will be invited memberS of the Steering Committee on a permanent basis	Steering Committee	11/05/2018	In Progress
D02/A05	Joint Steering Committees of CB MIREME and RERD2 will be held jointly; additional Steering Committees may be held for each project individually if need be	Steering Committee	11/05/2018	In Progress
D03	TFF's reference to CNELEC applies to ARENE	Steering Committee	11/05/2018	Completed
D04	CB MIREME and FUNAE to provide more detailed activity planning until end of 2018	Steering Committee	11/05/2018	Completed
D05	Inclusion of Department of Human Resources of Mireme in the Steering Committee	Steering Committee	20/03/2019	Completed

D06	Direcção Nacional de Energia will be invited to the Steering Committee as well.	Steering Committee	20/03/2019	Completed
D07	Pending Technical meeting with MIREME and ARENE technical management on 12/12/2019, conditional approval of the annual report and 2019 budget of the CBMIREME/ARENE programme and non-approval of CBMIREME/ARENE's 2020 Business Plan and Budget. More internal Mireme coordination is required.	Steering Committee	05/12/2019	In Progress

9.3 Considered strategic reorientations

Not applicable.

9.4 Recommendations

Recommendations	Actor	Deadline
Provincial outreach needs to become more planned, systematic and visible	Steering Committee	Q2 2020
Substantial effort in communication and training on what renewable energy can mean for rural development and gender equity is required. A backstopping together with a local gender consultant is required.	Enabel	Q2 2020
A new JE is required for vulgarization on what renewable energy can mean for rural development and gender equity	Enabel	Q1 2020

10 Annexes

10.1 Quality criteria

For each of the criteria (Relevance, Efficiency, Effectivity and Potential sustainability) several sub-criteria and statements regarding the latter have been formulated. By choosing the formulation that best corresponds to your intervention (add an 'X' to select a formulation) you can calculate the total score applicable to that specific criterion (see infra for calculation instructions).

1. RELEVANCE: The extent to which the intervention is in line with local and national policies and priorities as well as with the expectations of the beneficiaries.		
Do as follows to calculate the total score for this quality criterion: At least one 'A', no 'C' or 'D' = A; two 'B's = B; at least one 'C, no 'D' = C; at least one 'D' = D		
Appraisal of RELEVANCE: Total score	**A**	**B** / **C** / **D**
1.1 1.1. What is the current degree of relevance of the intervention?		
X	**A**	Clearly still anchored in national policies and the Belgian strategy, meets the commitments on aid effectiveness, extremely relevant for the needs of the target group.
…	**B**	Still embedded in national policies and the Belgian strategy (even though not always explicitly so), relatively compatible with the commitments on aid effectiveness, relevant for the needs of the target group.
…	**C**	A few questions on consistency with national policies and the Belgian strategy, aid effectiveness or relevance.
…	**D**	Contradictions with national policies and the Belgian strategy, the commitments on aid effectiveness; doubts arise as to the relevance vis-à-vis the needs. Major changes are required.
1.2 Is the intervention logic as currently designed still the good one?		
	A	Clear and well-structured intervention logic; vertical logic of objectives is achievable and coherent; appropriate indicators; risks and hypotheses clearly identified and managed; intervention exit strategy in place (if applicable).
X	**B**	Appropriate intervention logic even though it could need certain improvement in terms of hierarchy of objectives, indicators, risks and hypotheses.
	C	Problems pertaining to the intervention logic could affect performance of an intervention and its capacity to control and evaluate progress; improvements required.
	D	The intervention logic is faulty and requires an in-depth review for the intervention to possibly come to a good end.

2. EFFICIENCY OF IMPLEMENTATION TO DATE: A measure of how economically resources of the intervention (funds, expertise, time, etc.) are converted in results.		
Do as follows to calculate the total score for this quality criterion: At least two 'A's, no 'C' or 'D' = A; two 'B's = B, no 'C' or 'D' = B; at least one 'C, no 'D' = C; at least one 'D' = D		
Appraisal of the EFFICIENCY: Total score	**A**	
	B	
	C	
	D	
2.1 To what extent have the inputs (finances, HR, goods & equipment) been managed correctly?		
	A	All inputs are available in time and within budget limits.
X	**B**	Most inputs are available within reasonable time and do not require considerable budgetary adjustments. Yet, there is still a certain margin for improvement possible.
	C	The availability and use of inputs pose problems that must be resolved, otherwise the results could be at risk.
	D	The availability and management of the inputs is seriously lacking and threaten the achievement of the results. Considerable changes are required.
2.2 To what extent has the implementation of activities been managed correctly?		
	A	Activities are implemented within timeframe.
X	**B**	Most activities are on schedule. Certain activities are delayed, but this has no impact on the delivery of outputs.
	C	The activities are delayed. Corrective measures are required to allow delivery with not too much delay.
	D	The activities are seriously behind schedule. Outputs can only be delivered if major changes are made to planning.
2.3 To what extent are the outputs correctly achieved?		
	A	All outputs have been and will most likely be delivered on time and in good quality, which will contribute to the planned outcomes.
X	**B**	The outputs are and will most likely be delivered on time, but a certain margin for improvement is possible in terms of quality, coverage and timing.
	C	Certain outputs will not be delivered on time or in good quality. Adjustments are required.
	D	The quality and delivery of the outputs most likely include and will include serious shortcomings. Considerable adjustments are required to guarantee at least that the key outputs are delivered on time.

3. EFFECTIVENESS TO DATE: Extent to which the outcome (specific objective) is achieved as planned at the end of year N				
Do as follows to calculate the total score for this quality criterion: At least one 'A', no 'C' or 'D' = A; two 'B's = B; at least one 'C, no 'D' = C; at least one 'D' = D				
Appraisal of EFFECTIVENESS: Total score	**A**	**B**	**C**	**D**

3.1 At the current stage of implementation, how likely is the outcome to be realised?		
	A	It is very likely that the outcome will be fully achieved in terms of quality and coverage. Negative results (if any) have been mitigated.
X	**B**	The outcome will be achieved with a few minor restrictions; the negative effects (if any) have not had much of an impact.
	C	The outcome will be achieved only partially, among other things due to the negative effects to which the management was not able to fully adapt. Corrective measures should be taken to improve the likelihood of achieving the outcome.
	D	The intervention will not achieve its outcome, unless significant fundamental measures are taken.
3.2 Are the activities and outputs adapted (where applicable) in view of achieving the outcome?		
	A	The intervention succeeds to adapt its strategies/activities and outputs in function of the evolving external circumstances in view of achieving the outcome. Risks and hypotheses are managed proactively.
X	**B**	The intervention succeeds rather well to adapt its strategies in function of the evolving external circumstances in view of achieving the outcome. Risk management is rather passive.
	C	The project has not fully succeeded to adapt its strategies in function of the evolving external circumstances in an appropriate way or on time. Risk management is rather static. A major change to the strategies seems necessary to guarantee the intervention can achieve its outcome.
	D	The intervention has not succeeded to react to the evolving external circumstances; risk management was not up to par. Considerable changes are required to achieve the outcome.

4. POTENTIAL SUSTAINABILITY: The degree of likelihood to maintain and reproduce the benefits of an intervention in the long run (beyond the implementation period of the intervention).				
Do as follows to calculate the total score for this quality criterion: At least three 'A's, no 'C' or 'D' = A; maximum two 'C's, no 'D' = B; at least three 'C's, no 'D' = C; at least one 'D' = D				
Appraisal of POTENTIAL SUSTAINABILITY: Total score	**A**	**B**	**C**	**D**

4.1 Financial/economic sustainability?		
	A	Financial/economic sustainability is potentially very good: Costs related to services and maintenance are covered or reasonable; external factors will have no incidence whatsoever on it.

	B	Financial/economic sustainability will most likely be good, but problems may arise in particular due to the evolution of external economic factors.
X	**C**	The problems must be dealt with concerning financial sustainability either in terms of institutional costs or in relation to the target groups, or else in terms of the evolution of the economic context.
	D	Financial/economic sustainability is very questionable, unless major changes are made.
4.2 What is the degree of ownership of the intervention by the target groups and will it prevail after the external assistance ends?		
	A	The Steering Committee and other relevant local instances are strongly involved at all stages of execution and they are committed to continue to produce and use the results.
	B	Implementation is strongly based on the Steering Committee and other relevant local instances, which are also, to a certain extent, involved in the decision-making process. The likelihood that sustainability is achieved is good, but a certain margin for improvement is possible.
X	**C**	The intervention mainly relies on punctual arrangements and on the Steering Committee and other relevant local instances to guarantee sustainability. The continuity of results is not guaranteed. Corrective measures are required.
	D	The intervention fully depends on punctual instances that offer no perspective whatsoever for sustainability. Fundamental changes are required to guarantee sustainability.
4.3 What is the level of policy support delivered and the degree of interaction between the intervention and the policy level?		
	A	The intervention receives full policy and institutional support and this support will continue.
X	**B**	The intervention has, in general, received policy and institutional support for implementation, or at least has not been hindered in the matter and this support is most likely to be continued.
	C	The sustainability of the intervention is limited due to the absence of policy support. Corrective measures are required.
	D	Policies have been and will most likely be in contradiction with the intervention. Fundamental changes seem required to guarantee sustainability of the intervention.
4.4 To what degree does the intervention contribute to institutional and management capacity?		
	A	The intervention is integrated in the institutions and has contributed to improved institutional and management capacity (even though it is not an explicit objective).
X	**B**	The management of the intervention is well integrated in the institutions and has contributed in a certain way to capacity development. Additional expertise may seem to be required. Improvement is possible in view of guaranteeing sustainability.
	C	The intervention relies too much on punctual instances rather than on institutions; capacity development has failed to fully guarantee sustainability. Corrective measures are required.
	D	The intervention relies on punctual instances and a transfer of competencies to existing institutions, which is to guarantee sustainability, is not likely unless fundamental changes are made.

10.2 Updated Logical framework and/or Theory of Change

IMPACT: 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			
Indicators	**Sources of Verification**	**Baseline value (2017)**	**Target Value**
Percentage of the Mozambican population with access to electricity	Plano Quinquenal do Governo (PQG) Annual reports Plano Economico e Social (PES)	26%	38% by2020
Percentage of the Mozambican population with access to renewable off-grid electricity	Plano Quinquenal do Governo (PQG) Plano Economico e Social (PES)	TBC	652500 of 28644358 by 2020 (TBC)

OUTCOME: The performance of MIREME and ARENE in advancing access to renewable electricity in rural areas is enhanced			
Indicators	**Sources of Verification**	**Baseline value (2017)**	**Target Value**
Actual rate of implementation of MIREME's and ARENE's activities incorporated in annual plans related to access to energy	Plano Economico e Social (PES)	TBC	As from annual plan 2021, at least 70% implementation rate
Number of connections to be supported by the National Electrification Program 2018-2030	EDM , DPC, FUNAE, IPPS (off-grid) reports and MIREME's IT platform once established	TBC	90% of 785,206 connections
Number of connections to be supported by the National Electrification Program 2018-2030 through renewable off-grid electricity	EDM , DPC, FUNAE, IPPS (off-grid) reports and MIREME's IT platform once established	TBC	652,500 connections through renewable off-grid electricity
Priority regulatory instruments for renewable off-grid electricity are published	Report of ARENE	0	50% identified in 2019 are published by the end of 2020
ARENE implements and monitors pilot regulatory instruments in renewable off-grid electricity	Reports of CB MIREME	0	70% implemented and monitored by Dec 2022
Dissemination of specific information on renewable energy to rural areas for consumers, producers and investors.	Reports of MIREME, DIPREME and ARENE	>=60%	The majority of adult rural respondents to surveys at the end of the project indicate a satisfactory level of knowledge on sources, uses and pros and cons of renewable energy, as well as their local accessibility.

RESULT 1: MIREME's capacities at the central level are strengthened to improve planning and policy-making in the energy sector			
Indicators	**Sources of Verification**	**Baseline value (2017)**	**Target Value**
1. Improvement of MIREME's capacity at the central level for harmonized and reliable planning of the energy sector.			
• New manual of coordinated and harmonized planning and M&E	• New manual of coordinated and harmonized planning and M&E	0	• Manual of planning, M&E is developed and disseminated in 2019
• Good quality annual plans are drafted which follow the manual's instructions, and are coordinated and harmonized with all stakeholders in the sector	• Score of more than 70% in annual compliance evaluation by DPC	0	• at least 3 annual plans are elaborated following the Planning and M&E Manual (throughout project period of 4 years)
• Good quality annual plans are drafted which enable a high annual realization rate of planned activities	• Score of more than 70% in annual compliance evaluation by DPC	0	• 90% realization rate of the activities in the annual plan in the year 2021
2. Improvement of MIREME' s capacity at central level to produce data, statistics and quality information on the energy sector			
•IT platform for centralised reporting and information management	• IT platform	0	• Fit-for-purpose IT platform for centralised energy sector reporting and information management established and operational
•Methodology chapter on data management and analysis in manual of planning and M&E	• Methodology chapter on data management and analysis in manual of planning and M&E	0	• Methodology chapter on data management and analysis is developed and disseminated in 2019 as part of the Manual of planning and M&E
•Good quality quarterly evaluation reports are drafted which follow the methodological manual's instructions, and are coordinated and harmonized with all stakeholders in the sector	• Score of more than 80% in quarterly compliance evaluation by DPC	0	Elaboration of quarterly reports as per methodological guidelines (4 per year, starting from Q4 2020) Pilots at least in Zambezia, Sofala, Manica.
•Dissemination of specific information on renewable energy to rural areas for consumers, producers and investors.	• Information booklets • Radio and TV slots • Social media messages	0	Information is available in whole country and at DIPREMEs on sources, uses and pros and cons of renewable energy, as well as their local accessibility. (availability assessment score of 80%)
3. Improvement of MIREME's capacity in the planning, recruiting, developing and retaining of employees			
• Improved HR Development Plan	• HR Development Plan	0	Improved HR Development Plan approved and shared in Q3 2019;
• A digitalised HR system to follow up on the quality, relevance and the effect of trainings	• Digitalised HR system	0	A digitalised HR system to follow up on the quality, relevance and the effect of trainings is developed and used

• Agreed number and types of trainings are delivered	MIREME DRH report on staff training and numbers	TBC	Agreed number and types of trainings per year in HR Development Plan delivered
• Reduction in the number of personnel who leave MIREME	• Survey satisfaction • MIREME DRH report	• TBC • 20%	• At least 60% of respondents are moderately satisfied with working conditions in Q42021 • Reduction in the number of personnel who leave MIREME (<5% by the end of 2021)
4. Development of technical, economic, legal and safety regulatory instruments for renewable off-grid electricity along with ARENE			
• Priority technical, economic, legal and safety regulatory instruments in the area of renewable off-grid electricity are developed.	Regulatory instruments	0	Half of the priority regulatory instruments for renewable off-grid electricity identified in 2019 are elaborated by Dec 2021
• Priority technical, economic, legal and safety regulatory instruments in the area of renewable off-grid electricity are approved.	Regulatory instruments	0	At least 3 priority regulatory instruments in the area of renewable off-grid electricity identified in 2019 are elaborated and approved by Q4 2020

RESULT 2: DIPREME's capacities are strengthened in order to improve the planning, coordination and M&E of the energy sector in the selected provinces (Zambezia, Sofala, Manica)			
Indicators	**Sources of Verification**	**Baseline value (2017)**	**Target Value**
1. Improved planning of the sector in the selected DIPREMEs			
• Good quality annual plans are drafted which follow the manual's instructions, and are coordinated and harmonized with central MIREME and relevant stakeholders in the province	• Score of more than 70% in annual compliance evaluation by DPC	0	3 annual plans are elaborated following the Planning and M&E Manual (throughout 4 years)
• Good quality annual plans are drafted which enable a high annual realization rate of planned activities	• Score of more than 70% in annual compliance evaluation by DPC	0	90% realization rate of the activities in the annual plan in the year 2021
2. Improved quality data and information shared between MIREME at central level and selected DIPREMEs			
Good quality quarterly reports are drafted which follow the methodological manual's instructions, and are coordinated and harmonized with central MIREME and relevant stakeholders in the province	• Score of more than 80% in quarterly compliance evaluation by DPC	0	Elaboration of quarterly reports as per methodological guidelines (4 per year, starting from Q4 2020)
Dissemination of specific information on renewable energy to rural areas for consumers, producers and investors	• Information booklets • Radio and TV slots • Social media messages	0	Information is available at DIPREMEs on sources, uses and pros and cons of renewable energy, as well as their local accessibility

3. Improved Human Resource Management			
A digitalised HR system to follow up on the quality, relevance and the effect of trainings	HR Development Plan	0	A digitalised system to follow up on the quality, relevance and the effect of trainings is developed and used
Agreed number and types of trainings are delivered	• Digitalised HR system • MIREME DRH report on staff training and numbers	0	Implementation of HR and Retention Strategy Agreed number and types of trainings per year in HR Development Plan delivered
Reduction in the number of personnel who leave DIPREMES	MIREME DRH report	20%	Reduction in the number of personnel who leave DIPREME (<5% by the end of 2021)
Improved working conditions and environment (refurbishment of buildings; IT equipment HR E-SISTAFE management….)	• Refurbishment of buildings; IT equipment HR E-SISTAFE management • Survey satisfaction	0	At least 60% of respondents are moderately satisfied with the local working conditions in Q42021

RESULT 3: The capacities of ARENE are strengthened to become a strong and independent regulator able to regulate new and renewable off-grid electricity			
Indicators	**Sources of Verification**	**Baseline value (2017)**	**Target Value**
1. Development of technical, economic and health & safety regulations for renewable off-grid electricity together with MIREME			
• Priority technical, economic, legal and safety regulatory instruments in the area of renewable off-grid electricity are developed.	Regulatory instruments	0	At least half of the priority regulatory instruments in the area of renewable off-grid electricity are developed by Q4 2021
• Priority technical, economic, legal and safety regulatory instruments in the area of renewable off-grid electricity are approved	Regulatory instruments	0	At least half of the priority regulatory instruments in the area of renewable off-grid electricity are approved by Q4 2021
2. Human resources framework of ARENE is elaborated and approved			
Appropriate human resources framework of ARENE is elaborated for the next 5 years	Human resources framework of ARENE	0	Internationally benchmarked human resources framework of professional qualifications, management functions and staffing levels for priority tasks is elaborated for the next 5 years by Q2 2020
Human resources framework of ARENE for the next 5 years is approved	Human resources framework of ARENE	0	Human resources framework of ARENE for the next 5 years in the area of renewable off-grid electricity is approved by Q3 2020

3. Human resources framework of ARENE is operational in pilot priority tasks in the domain of renewable off-grid electricity			
Human resources framework of ARENE is applied for priority tasks in the domain of renewable off-grid electricity	ARENE annual report on staff training and numbers	0	• At least 50% of staff numbers as per human resources framework for priority tasks in the domain of renewable off-grid electricity are appointed by Dec 2021
		0	• At least 50% of staff functions as per human resources framework for priority tasks in the domain of renewable off-grid electricity are filled by Dec 2021
		0	• Agreed number and types of trainings per year delivered
4. Pilot priority technical, economic and health & safety regulations for renewable off-grid electricity			
Priority pilots of technical, economic, legal and safety regulatory instruments in the area of renewable off-grid electricity are implemented and monitored.	ARENE annual report Project assessment survey	0	60 per cent of in 2020 approved priority regulatory instruments in the area of renewable off-grid electricity are implemented and monitored by Dec 2021 (specifically in Maputo, Zambezia, Sofala, Manica).

10.3 Monitoring of change management processes forms (optional)

Monitoring forms to be used for ongoing reflection or for an explicit research-action approach used by the intervention (See Content management guide).

Title Output 1
What is the assumption (1 phrase) leading to the intermediate outcome?
Is the Theory of Change (model, principles, values) underlying the assumption developed in an explicit manner? o No o Yes o Major changes made to the ToC during the year? If so, which ones? (Adapted ToC may be attached.)
Which are the major decisions taken in the year to realise the change on the basis of the assumption and which is their justification? o Decision 1 : ..... o Justification Decision 1: ..... o Decision 2: ..... o Justification Decision 2: .....
Were there any opportunities in the context (specifically related to the result) that have facilitated the change process and the achievement of the intermediate outcome?
Were there any major constraints in the context (specifically related to the result) that have negatively influenced the change process and the achievement of the intermediate outcome?
Has the (research-action) change process been documented? o No. o Yes If yes, under which form?
Has the documented change process been communicated in any way? o No o Yes If yes, under which form?

10.4 Summary of MoRe Results

Results or indicators of the logical framework changed during the last 12 months?	YES
Report of the Baseline registered in PIT?	YES
MTR Planning (registered report)	Q2 2020
ETR Planning (registered report)	11/2022 (estimate)
Backstopping missions since 01/01/2019	1

10.5 'Budget versus Actuals (y – m)' Report

Enabel

			Budget Execution/Activities			Expenses								Total expenses		
			MOZ1403011		Budget	2017	2018	Q1	Q2	Q3	Q4	Expenses FIT 2019		planning	Total FIT Expenses + planning
A			**The performance of MIREME and CNELEC in advancing access to renewable electricity in rural areas is enhanced**		**2,690,000.00**	**22,255.92**	**334,727.25**	**54,256.50**	**72,272.11**	**68,120.13**	**147,540.69**	**342,189.43**	**699,172.60**	**2,078,857.29**	**2,778,029.89**
A	01		The capacities of the MIREME at central level are strengthened in order to improve the energy sector planning and policy-making		**1,505,000.00**	21,072.63	161,569.12	26,612.21	22,224.74	24,556.65	35,682.33	**109,075.93**	**291,717.68**	**1,024,360.10**	**1,316,077.78**
A	01	01	Long Term technical Assistance	REGIE	**720,000.00**	21,072.63	126,260.80	25,507.53	18,935.32	14,531.79	24,812.81	**83,787.45**	**231,120.88**	**325,360.10**	**556,480.98**
A	01	02	Sector Planning within MIREME	REGIE	**140,000.00**		18,171.59	503.19	1,647.10	1,773.94	5,849.49	**9,773.72**	**27,945.31**	**188,000.00**	**215,945.31**
A	01	03	Quality data and information within MIREME	REGIE	**145,000.00**		14,523.58	573.22	1,213.86	68.71	25.69	**1,881.48**	**16,405.06**	**256,000.00**	**272,405.06**
A	01	04	Human Resources Management	REGIE	**120,000.00**		2,613.15	28.27	428.46	5,827.84	2,085.79	**8,370.36**	**10,983.51**	**173,000.00**	**183,983.51**
A	01	05	Support the development of technical, economical and Health & Safety regulations	REGIE	**20,000.00**		-			2,354.37	2,908.55	**5,262.92**	**5,262.92**	**82,000.00**	**87,262.92**
A	01	06	Medium Term Consultancies	REGIE	**360,000.00**							-	-	-	-
A	02		The capacities of the DIPREME are strengthened in order to improve energy sector planning, monitoring and supervision in selected provinces		**955,000.00**	431.24	101,217.60	21,329.65	38,542.43	34,257.72	104,253.96	**198,383.76**	**300,032.60**	**777,000.00**	**1,077,032.60**
A	02	01	Long Term technical Assistance	REGIE	**450,000.00**	431.24	92,754.99	20,924.74	21,539.92	25,181.07	24,010.99	**91,656.72**	**184,842.95**	**278,000.00**	**462,842.95**
A	02	02	Sector Planning within selected DIPREME	REGIE	**70,000.00**		1,427.47	6.91	15,333.97	6,187.78	351.04	**21,879.70**	**23,307.17**	**31,000.00**	**54,307.17**
A	02	03	Quality data and information between MIREME at central level and DIPREME	REGIE	**190,000.00**		844.90	314.65	1,668.54	1,140.54	4,400.60	**7,524.33**	**8,369.23**	**231,000.00**	**239,369.23**
A	02	04	Human Resources Management at provincial level	REGIE	**65,000.00**		6,190.24	83.35	-	1,748.33	75,491.33	**77,323.01**	**83,513.25**	**237,000.00**	**320,513.25**
A	02	05	Medium Term Consultancies	REGIE	**180,000.00**							-	-	-	-
A	03		Build ARENE into an independent and capable regulator for the new and renewable electricity sub-sector are supported		**230,000.00**	680.21	68,350.75	6,314.64	11,504.94	9,305.76	7,604.40	**34,729.74**	**103,760.70**	**277,497.19**	**381,257.89**
A	03	01	Long Term technical Assistance	REGIE	**180,000.00**	680.21	31,304.82	6,274.05	4,596.27	3,633.00	6,121.31	**20,624.63**	**52,609.66**	**111,497.19**	**164,106.85**
A	03	02	Support the development of technical, economic and health & safety regulations	REGIE	**50,000.00**		37,045.93	40.59	6,908.67	5,129.24	1,381.94	**13,460.44**	**50,506.37**	**136,000.00**	**186,506.37**
A	03	03	Human resources framework of ARENE is elaborated and approved	REGIE			-	-	-	543.52	101.15	**644.67**	**644.67**	**15,000.00**	**15,644.67**
A	03	04	Human resources framework of ARENE is operational in pilot priority tasks in the domain of new and renewable off-grid energies	REGIE									-	**15,000.00**	**15,000.00**
A	03	05	Pilot priority technical, economic and health & safety regulations for new and renewable off-grid energies	REGIE								-	-	-	-
A	04		IVA		-	71.84	3,589.78	-	-	-	-	-	**3,661.62**	-	**3,661.62**
A	04	01	IVA	REGIE		71.84	3,589.78					-	**3,661.62**	-	**3,661.62**
X			**Reserve**		**90,000.00**	-	-	-	-	-	-	-	-	**1,970.56**	**1,970.56**
X	01		Reserve		**90,000.00**	-	-	-	-	-	-	-	-	**1,970.56**	**1,970.56**
X	01	01	Direct Management reserve	REGIE	**90,000.00**							-	-	**1,970.56**	**1,970.56**
Z			**General Means**		**1,220,000.00**	**126,545.90**	162,716.73	27,750.44	38,807.52	40,882.05	**40,221.01**	**147,661.02**	**436,923.65**	**783,075.90**	**1,219,999.55**
Z	01		Wages and salaries		**810,000.00**	107,323.39	133,260.98	24,436.81	33,993.95	32,328.17	36,755.28	**127,514.21**	**368,098.58**	**439,979.84**	**808,078.42**
Z	01	01	Project management	REGIE	**450,000.00**	103,626.42	107,167.89	17,583.87	26,443.58	25,408.79	28,271.86	**97,708.10**	**308,502.41**	**295,979.84**	**604,482.25**
Z	01	02	Administrative and financial staff	REGIE	**300,000.00**	3,696.97	26,093.09	6,852.94	7,550.37	6,919.38	8,483.42	**29,806.11**	**59,596.17**	**108,000.00**	**167,596.17**
Z	01	03	Other support staff	REGIE	**60,000.00**		-	-	-	-	-	-	-	**36,000.00**	**36,000.00**
Z	02		Investments		**50,000.00**	4,953.05	4,270.36	37.56	564.19	137.39	34.16	**773.30**	**9,996.71**	**40,003.29**	**50,000.00**
Z	02	01	IT and office equipment	REGIE	**20,000.00**	4,953.05	4,151.54	37.56	564.19	137.39	34.16	**773.30**	**9,877.89**	**10,122.12**	**20,000.01**
Z	02	02	Vehicles	REGIE	**30,000.00**		118.82	-	-	-	-	-	**118.82**	**29,881.18**	**30,000.00**
Z	03		Operating costs		**225,000.00**	14,271.01	20,835.71	3,019.01	4,073.09	4,601.06	3,431.57	**15,124.73**	**50,231.45**	**175,787.00**	**226,018.45**
Z	03	01	Office premises / rental	REGIE	**24,000.00**	3,305.04	10,028.42	1,968.03	1,968.03	1,968.03	1,968.03	**7,872.12**	**21,205.58**	**25,500.00**	**46,705.58**
Z	03	02	Fuel and maintenance	REGIE	**30,000.00**	8,360.42	7,962.29	74.90	7.42	29.86	0.28	**112.46**	**16,435.17**	**10,800.00**	**27,235.17**
Z	03	03	Internet & Communication	REGIE	**12,000.00**	79.23	28.36	-	28.78	22.34	319.47	**370.59**	**478.18**	**5,400.00**	**5,878.18**
Z	03	04	Telecommunication costs	REGIE	**60,000.00**	279.92	1,051.54	97.90	106.95	110.20	106.45	**421.50**	**1,752.96**	**7,200.00**	**8,952.96**
Z	03	05	Office consumables	REGIE	**17,500.00**	135.96	612.26	201.06	-	-	-	**201.06**	**949.28**	**6,000.00**	**6,949.28**
Z	03	06	Missions costs	REGIE	**81,000.00**	1,871.40	1,092.83	651.82	1,925.42	2,464.47	1,036.45	**6,078.16**	**9,042.39**	**24,000.00**	**33,042.39**
Z	03	07	Other operating costs	REGIE	**500.00**	239.04	60.01	25.30	36.49	6.16	0.89	**68.84**	**367.89**	**96,887.00**	**97,254.89**
Z	04		Audit, Monitoring and Backstopping		**135,000.00**	-	4,320.18	192.24	-	3,181.81	-	**3,374.05**	**7,694.23**	**127,305.77**	**135,000.00**
Z	04	01	M&E (incl baseline, MTR and FE and capitalization exercise)	REGIE	**80,000.00**		4,320.18	192.24	-	3,181.81	-	**3,374.05**	**7,694.23**	**72,305.77**	**80,000.00**
Z	04	02	Technical backstopping	REGIE	**20,000.00**							-	-	**20,000.00**	**20,000.00**
Z	04	03	Audits	REGIE	**35,000.00**							-	-	**35,000.00**	**35,000.00**
Z	99		Conversion rate adjustment		-	- 1.55	29.50	64.82	176.29	633.62	-	**874.73**	**902.68**	-	**902.68**
Z	99	98	Conversion rate adjustment	REGIE	-	- 1.55	29.50	64.82	176.29	633.62	-	**874.73**	**902.68**	-	**902.68**
				Total:	**4,000,000.00**	**148,801.82**	**497,443.98**	**82,006.94**	**111,079.63**	**109,002.18**	**187,761.70**	**489,850.45**	**1,136,096.25**	**2,863,903.75**	**4,000,000.00**

10.6 Resources in terms of communication

Waeterloos, E. and A.Van de Velde (2019) Strengthening coordination in the supply and demand of aid to Mozambique's energy sector, Blog open.enabel.be January 2019

Van de Velde, A. and E.Waeterloos (2019) Climate and energy crises in Mozambique: time to refuel the debate? Blog open.enabel.be April 2019

de Clippele, A. and E. Waeterloos (2019) Rural renewable energy use and the challenge of clear communication Blog open.enabel.be December 2019