

**GOVERNMENT OF THE REPUBLIC OF NAMIBIA**

**MINISTRY OF MINES AND ENERGY**

# **NATIONAL ENERGY POLICY**

# **IMPLEMENTATION PLAN**

**DRAFT FOR PUBLIC CONSULTATION**

**25 JANUARY 2017**

**NOTE:**

**This draft document is provided for final comments and inputs by stakeholders.**

**All comments received will be considered by the Energy Policy Update Committee for inclusion in the final document.**

**Comments and inputs should be provided in writing and sent to [info@energypolicy.org.na](mailto:info@energypolicy.org.na) or faxed to 0886 55 22 73.**

**A final national stakeholder workshop will be conducted in Windhoek on 6 February 2017 where the draft policy statements will be discussed and inputs can also be made.**

**The deadline for final inputs is Monday 13 February 2017.**

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## Acronyms and Abbreviations

DSM	Demand Side Management
ECB	Electricity Control Board
EDI	Electricity Distribution Industry
EE	Energy Efficiency
EIA	Environmental Impact Assessment
ESI	Electricity Supply Industry
GWh	Giga-Watt-hour
HPP	Harambee Prosperity Plan
IEA	International Energy Agency
INDCs	Intended Nationally Determined Contributions
IPP	Independent Power Producer
kWh	Kilo-Watt-hour
LPG	Liquid Petroleum Gas
MME	Ministry of Mines and Energy
MW	Mega-Watt
NAMCOR	National Petroleum Corporation of Namibia
NamPower	Namibia Power Corporation
NEC	National Energy Council
NEF	National Energy Fund
NEI	Namibia Energy Institute
NERA	Namibia Energy Regulatory Authority
NIRP	National Integrated Resource Plan
NPC	National Planning Commission
NUST	Namibia University of Science and Technology
OGEMP	Off-Grid Energisation Master Plan
PIT	Petroleum Income Tax
PPA	Power Purchase Agreement
RE	Renewable Energy
RED	Regional Electricity Distributor
REDMP	Rural Electricity Distribution Master Plan
SADC	Southern African Development Community
SAPP	Southern African Power Pool
SDG	Sustainable Development Goals
TWh	Tera-Watt-hour
UN	United Nations
UNAM	University of Namibia
UNFCCC	United Nations Framework Convention on Climate Change

## 1 Introduction

This document presents the Implementation Plan for the National Energy Policy of Namibia. The Plan provides a set of strategic actions required to implement the Policy, and also gives an indication of when these actions should be undertaken and completed.

It is anticipated that the implementation actions that are included in this Implementation Plan will become integral elements of more detailed shorter-term action plans drawn up by the Ministry of Mines and Energy (MME). In addition, they should inform future ministerial strategic plans, for which they would then need to be endowed with detailed budgets and other resource allocations, and clearly identify all relevant entities and actors required for implementation.

The remaining sections of this Plan are structured as follows:

- Section 2 introduces the main elements of the implementation framework
- Section 3 presents the detailed Implementation Action Plan.

## 2 Implementation Framework

This section describes the high-level framework within which the National Energy Policy will be implemented. An Implementation Action Plan has been prepared, and is issued as a separate document that complements this Policy.

### 2.1 Institutional Arrangements

Institution	Roles
Ministry of Mines and Energy	The MME has the primary responsibility of implementing the National Energy Policy. It may delegate activities to other institutions active in the energy sector, provided this is clearly communicated, and that appropriate resources are availed for such activities.
National Planning Commission	The NPC is responsible for the overall management and monitoring of the implementation of government policy, and therefore exercises oversight over the MME's implementation of this Policy.
Electricity Control Board	The ECB, as a regulatory body, is responsible for the implementation of activities that fall within its regulatory mandate, in compliance with the provisions of this Policy. This includes the future mandates as envisaged once the ECB has been transformed into NERA.
Namibia Energy Institute	The NEI, as a Government agency, is responsible for the implementation of activities that fall within its designated mandate, including additional mandates that may be added through this and other policies.
NAMCOR	NAMCOR, as a Government agency, is responsible for the implementation of activities that fall within its designated mandate, including additional mandates that may be added through this and other policies.

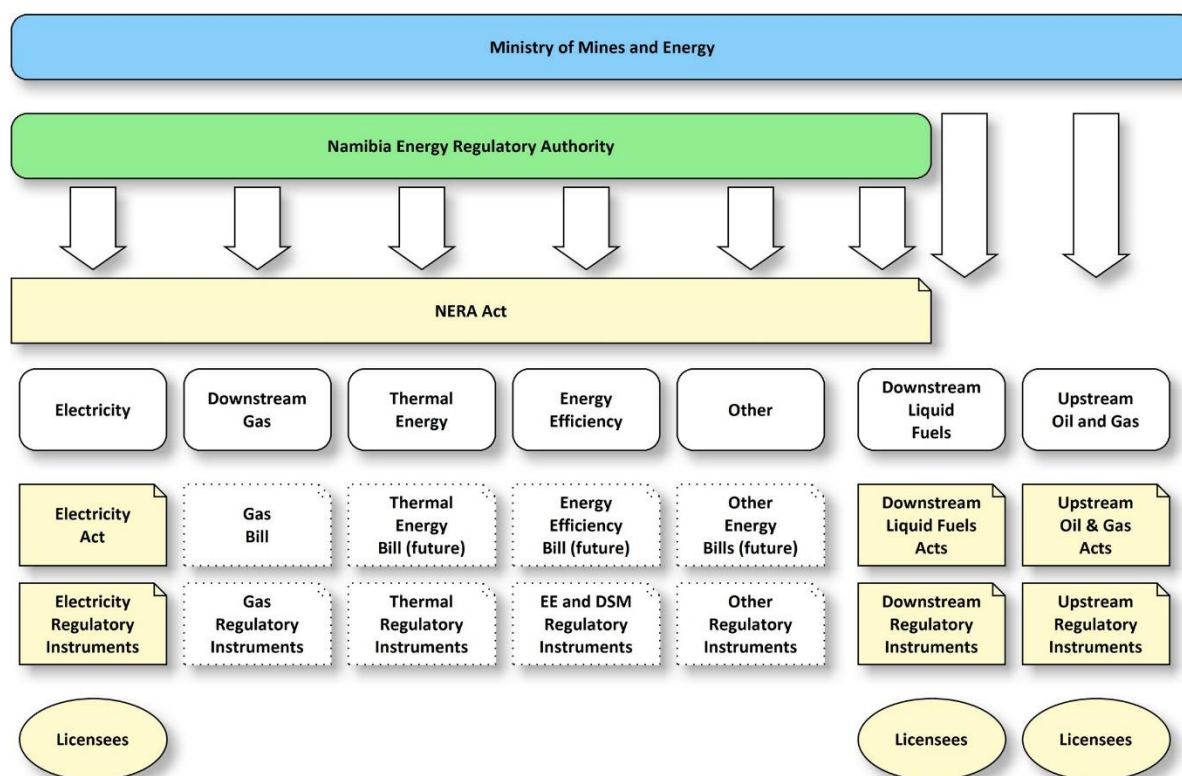
As and when mandated through legal and regulatory provisions that are enforceable on them, utilities, licensees and other energy sector participants are responsible for implementing those activities that they are tasked with under this and other policies.

### 2.2 Legal and Regulatory Provisions

The implementation of this Policy will commence within the existing legal and regulatory frameworks governing Namibia's energy sector. Of note, are the finalisation and promulgation of the NERA and Electricity Bills, which are intended to update the legal and regulatory frameworks covering the electricity sector, and to provide a legal basis for the regulation of other sectors,

including the downstream gas sector, thermal energy sector, and energy efficiency and demand side management. Additional laws will need to be promulgated to activate NERA’s regulatory responsibilities and functions in sectors other than the electricity sector. Preliminary provisions for such activation are included in the Implementation Action Plan. The legal framework for upstream oil and gas is also under review, and changes may be introduced in the licensing regime and other areas.

The envisaged future legal and regulatory framework, as illustrated in Figure 1 below, is preliminary in nature, and may change because of activities foreseen under this Policy. It should also be noted that the renewable and thermal energy sectors are expected to be regulated under the future provisions of the electricity sector, and will not necessarily fall under their own dedicated frameworks.



*Figure 1: Envisaged Future Legal and Regulatory Framework*

## 2.3 Resource Mobilisation

The mobilisation of resources required to implement this Policy is likely to proceed using a variety of channels and approaches, of which the main options and responsibilities are summarised below.

<b>Funding Source</b>	<b>Envisaged Application</b>	<b>Main Responsibility</b>
Government Budget	All activities that cannot be funded from the sources below	MME, in consultation with NPC
National Energy Fund	Activities that fall within the legal scope and financial means of the NEF	MME (for example, through adjusting the levels of levies that contribute to the NEF)
ECB Levy (and related levies raised by NERA in the future)	Activities that fall within the regulatory responsibilities of the ECB / NERA	ECB / NERA, with authorisation of the MME when required
Public-Private Partnerships	Activities from which the PPPs can directly benefit	MME / Ministry of Finance to facilitate the processes required to enable such funding
Private Sector	Activities from which the private sector can directly benefit	MME to facilitate the processes required to enable such funding
Grant Funding	Activities that can benefit from grant funding	MME, in consultation with ministries and agencies that are tasked with facilitating and administering such funding

## 2.4 Reporting, Monitoring and Evaluation

The implementation of this Policy is to be monitored and evaluated by the National Planning Commission, in accordance with its mandate. On approval of this Policy, scope and timing of regular reporting by the MME to the NPC is to be agreed upon. Monitoring and evaluation is to be based on the Implementation Plan, which will, from time to time, be further elaborated in the MME's strategic plans.

## 2.5 Advocacy and Dissemination

The MME is responsible for the dissemination of this Policy, and the facilitation of all advocacy activities associated with it. Specific advocacy activities are described in the Implementation Plan. The Implementation Plan may, from time to time, and as required, be further refined and formulated by the MME. In addition, the MME may delegate the implementation of specific advocacy activities and responsibilities as they arise under this Policy to regulatory bodies, Government agencies and energy industry participants, as appropriate and in a manner that ensures effective implementation.



### 3 Implementation Action Plan

This section presents the detailed Implementation Action Plan, and provides the key implementation activities for each of the policy areas addressed in the National Energy Policy. The Plan is therefore divided into the same policy topic sections as contained in the Policy.

Appropriate Policy statements are indicated using the (P.) references, and Action items are numbered using a similar system, indicated by specific Action item (A.) numbers to enable convenient cross-referencing.

Note that Action item sub-numbers, for example, A20.1, do not imply a link to Policy statement sub-numbers such as P20.1, but merely implies that all 'A20' Action items belong to the 'P20' Policy statements. In some cases, action items under one policy topic may also address requirements of other policy topics.

The Action Plan identifies target outcomes across three time periods, namely, a short-term implementation period up to 2020, a medium implementation period up to 2025, and a long-term implementation period up to 2030. As is typical for action plans, most actions are placed within the first few years rather than further into the future. It is therefore recommended that the Implementation Action Plan be reviewed at intervals not exceeding five years (e.g., in 2020 and 2025), and earlier should priorities change or progress timelines differ from those anticipated.

The Action Plan also identifies the entity responsible for initiating actions on each item, and the entity responsible for mobilising the requisite funding. This does not imply that the identified entity must also fully execute the activity, i.e., the responsible entity may delegate when appropriate, but retains responsibility for initiating the activity and for achievement of outcomes. Similarly, the entity responsible for mobilisation of funding does not necessarily have to fund the activity itself, but must mobilise funding from whatever source that may be available and suitable.

Entities are referred to by their current names or abbreviations in the tables. This includes any successors (e.g., ECB is intended to become NERA) who are expected to continue to remain responsible for activities assigned to their original entities identified in the action tables.

### 3.1 Electricity Sector

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P1: Electricity Generation</b>					
A1.1	Develop and regularly update the NIRP to reflect changing circumstances and technological developments to enhance security of supply at reasonable cost.	NIRP updated by 2020	NIRP updated by 2024	NIRP updated not later than 2028	MME / MME
A1.2	Implement the NIRP through timely and clear implementation notices regarding the procurement of generation capacity that mandate specific entities to implement generation projects.	First implementation regulations and notices issued by 2018	on-going	on-going	MME / MME
A1.3	Set requirement levels for local participation in new generation projects appropriate for the size and type of technology chosen, taking the context of available local capacity and capital into account.	Requirement levels set and included in implementation notices from 2018	on-going	on-going	MME / MME
A1.4	Make appropriate capacity allocations for mini- and micro-generators to feed into the national grid and mini-grid networks, and ensure they are fairly compensated for such inputs by facilitating the development of net metering rules and other tools.	Include in implementation notices from 2018	on-going	on-going	MME / MME
A1.5	Engage the relevant Ministries and other stakeholders regarding the creation of standardised procedures for land acquisition in all categories of land, and clear and predictable requirements for different land owner categories to ensure adequate benefit-sharing.	Standardised models developed by 2018	n/a	n/a	MME / MME
<b>P2: Electricity Transmission</b>					
A2.1	Develop and adopt rules and methodologies which enable the wheeling of power by third parties across the grid, in line with the revised market model that is to be developed.	Rules and methodologies developed and implemented by 2019	n/a	n/a	ECB / ECB
A2.2	Engage with NamPower to ensure adequate transmission system planning, development and maintenance, and to plan for cross-border connections.	Commence in 2017	on-going	on-going	ECB / ECB
A2.3	Engage with NamPower to determine appropriate government and private investments in strategic transmission infrastructure.	Commence in 2018	on-going	on-going	MME / MME

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P3: Electricity Distribution and Supply</b>					
A3.1	Implement the Central RED and Southern RED.	Implementation completed by 2019	n/a	n/a	MME / MME
A3.2	Investigate the continued involvement of NamPower in the distribution sector, and implement the findings.	Study completed by 2018, implemented by 2019	n/a	n/a	MME / MME
A3.3	Review the pricing approach for distribution and supply, and implement steps to better reflect fixed and variable costs through fixed and variable charges.	Study completed by 2018, implementation to commence in 2019	on-going	on-going	ECB / ECB
A3.4	Engage with distribution industry stakeholders to develop a long-term strategy to ensure the on-going role and viability of the distribution grid.	Strategy developed by 2020	Strategy implemented from 2022	on-going	ECB / ECB
A3.5	Update the distribution infrastructure standards to include new grid management technologies.	Standards updated by 2020	Standards implemented by licensees from 2022	n/a	ECB / ECB
<b>P4: Import and Export of Electricity</b>					
A4.1	Support import and export licensees in negotiating contracts with foreign utilities by engaging with relevant authorities at Government level to activate co-operation agreements implied in SADC protocols and development plans.	Commence in 2017	on-going	on-going	MME / MME
A4.2	Assess the potential and desirability of becoming a net electricity exporter for the benefit of the Namibian economy.	Study completed by 2019	Results implemented in NIRP	Results implemented in NIRP	MME / MME
<b>P5: Electricity Regulation</b>					
A5.1	Finalise and promulgate the NERA Bill and Electricity Bill, and implement the transformation of the ECB into NERA.	Bills promulgated and ECB transformed by 2018	n/a	n/a	MME / MME
A5.2	Assess existing subsidies and cross-subsidies, as and where applicable in the ESI, and develop a transparent subsidy framework for the ESI based on sound economic principles to promote the country's sustainable economic growth, alleviate poverty, and foster industrial development.	Study completed by 2019, decisions taken by 2020	Subsidy framework implementation to start in 2020	on-going	ECB / ECB

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
A5.3	Establish a 'one-stop-facilitation' centre at the Regulator to facilitate licensing, permitting, land acquisition, and compliance matters (including requirements outside the Regulator's direct mandate, such as environmental and land acquisition matters).	Facilitation centre fully operational by 2018	n/a	n/a	ECB / ECB
A5.4	Engage with Regulator to identify support needed in enforcing licence conditions.	Support provided by 2019	on-going	on-going	MME / MME
A5.5	Develop rules and standards, as appropriate, to ensure that licensees implement monitoring and verification activities.	Requirements implemented by 2020	n/a	n/a	ECB / ECB
<b>P6: Electricity Market and Trading of Electricity</b>					
A6.1	Launch an in-depth assessment of market model options for Namibia, including their technical, economic and other implications.	Study completed in 2018, implementation to commence in 2019	on-going	on-going	ECB / MME
A6.2	Develop an electricity supply industry roadmap describing the on-going evolution of Namibia's electricity market.	Roadmap completed by 2018	on-going	on-going	ECB / MME
A6.3	Support the adoption of the identified market model.	First support provided from 2019	on-going	on-going	ECB / MME
A6.4	Ensure that the value of NamPower as a national asset is safe-guarded, and enhanced in the development and implementation of the new market model.	First support provided from 2017	on-going	on-going	ECB / MME
<b>P7: Energy Efficiency and Demand Side Management in the Electricity Sector</b>					
A7.1	Develop a policy and a legal and regulatory framework for energy efficiency and demand side management to empower the ECB to regulate these aspects.	Policy developed by 2019, legal framework promulgated by 2020	n/a	n/a	MME / MME
A7.2	Develop and implement standards relating to energy efficiency and demand side management in collaboration with the NSI, with specific consideration for building standards and energy efficient appliances.	Development started by 2019, implementation to commence by 2020	n/a	n/a	ECB / ECB
A7.3	Develop and implement demand side management and energy efficiency measures and programmes to be implemented by licensees, including, but not limited to, related research and consumer awareness programmes.	Development started by 2019, implementation to commence by 2020	on-going	on-going	ECB / ECB

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
A7.4	Liaise with relevant ministries and agencies to ensure that energy efficiency measures are included in the design of all government buildings and all publicly funded or supported housing programmes.	Liaison to commence by 2018	on-going	on-going	ECB / ECB
<b>P8: Energy Storage</b>					
A8.1	Undertake a study to assess energy storage options and technologies to identify those suitable for use in Namibia.	Study completed by 2019	Results implemented in NIRP	Results implemented in NIRP	ECB / ECB
A8.2	Develop and implement standards, regulations and rules that enable the integration of energy storage into the transmission and distribution grids, including the relevant network design standards.	Regulations and rules completed by 2020	Results implemented by 2022	on-going	ECB / ECB
A8.3	Undertake an assessment of the potential roles and impacts of the introduction of electricity storage technologies on grid stability, and the increase of intermittent generation capacity in the country's electricity mix.	Study completed by 2019	Results implemented in NIRP	Results implemented in NIRP	ECB / ECB

### 3.2 Upstream Oil and Gas Sector

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P9: Promotion of Exploration and Production</b>					
A9.1	Establish a National Upstream Petroleum Advisory Committee (NUPAC) to advise the Parliamentary Committee on Natural Resources on all upstream petroleum exploration and development matters.	Committee established and operational by 2017	NUPAC advises the Parliamentary Committee at least once per year		MME / MME
A9.2	Identify and promote unlicensed areas for focused exploration work to increase the possibility of a commercial oil discovery.	Unlicensed areas identified by 2017	Promotion of unlicensed areas to commence by 2019	on-going	NAMCOR / MME
A9.3	Develop promotional materials for licensed and unlicensed areas, and disseminate these to prospective investors.	Materials developed by 2017, disseminated by 2018	on-going	on-going	MME / NAMCOR
A9.4	Initiate, support and participate in national, regional and international exploration and production promotion activities.	Annual participation in at least one promotional event			MME / NAMCOR
A9.5	Develop the necessary skills and capacity to effectively participate and promote exploration and production activities.	Training seminars to commence by 2017	on-going	on-going	MME / NAMCOR
A9.6	Collaborate and liaise with relevant Government entities, including the Ministry of Industrialisation, Trade and SME Development (MITSMED), to promote Namibia's exploration opportunities to a national, regional and international audience.	Meeting held at least once per year			MME / NAMCOR / MITSMED
A9.7	Investigate opportunities for the continued development and skills-upgrade of relevant support services in the upstream oil and gas industry.	Investigation completed by 2017, findings disseminated by 2018	on-going	on-going	MME / NAMCOR
<b>P10: Upstream Petroleum Regulation</b>					
A10.1	Develop and maintain appropriate capabilities to ensure that all relevant regulatory activities are undertaken.	Training seminars to commence by 2017	on-going	on-going	MME / NAMCOR

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
A10.2	Review and clarify the institutional mandates of the various public institutions (including NAMCOR) involved in the petroleum sector.	Review completed by 2018	First findings implemented by 2020	on-going	MME / MME
A10.3	Review and update the petroleum acts, regulations and agreements, in line with international best practice.	Review and update completed by 2020	on-going	on-going	MME / MME
A10.4	Benchmark the legal and fiscal frameworks used in oil producing countries, and ensure that Namibia's framework conditions are consistent, standardised, and competitive in the international arena.	Studies completed by 2020	on-going	on-going	MME / MME
A10.5	Collaborate with relevant Government entities (such as those responsible for the environment, fisheries, finance, trade, works and transport, and lands) to ensure that mutual responsibilities lead to the effective regulation of the oil and gas sector.	Inter-ministerial meeting held at least once per year			MME, and other relevant Government entities / MME
A10.6	Establish a committee to ensure transparency and accountability in all matters relating to Namibia's oil and gas sector, in line with best industry practices.	Committee established by 2017	on-going	on-going	MME / MME
<b>P11: Geoscience Data Collection and Management</b>					
A11.1	Initiate, support and provide adequate training and skills development opportunities for Namibians.	Training seminars to commence by 2017	on-going	on-going	MME / NAMCOR
A11.2	Initiate, support and provide practical training opportunities focusing on the acquisition, interpretation, storage, and maintenance of the oil and gas sector's databases.	Opportunities identified by 2017	on-going	on-going	MME / NAMCOR
A11.3	Promote the acquisition and processing of data using contemporary approaches and technologies to increase and sustain investments in the oil and gas exploration sector.	Promotion activities to commence by 2017	on-going	on-going	MME / NAMCOR
A11.4	Develop guidelines and procedures on the management and use of the oil and gas sector's databases, including the safeguarding of confidential information.	Guidelines completed by 2018	on-going	on-going	MME / NAMCOR
A11.5	Encourage oil and gas companies operating in Namibia to invest in on-going training programmes.	Industry engaged by 2017	on-going	on-going	MME / NAMCOR

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P12: Health, Safety, and Environmental (HSE) Considerations</b>					
A12.1	Assess the adequacy of existing institutions in terms of their HSE functions and capabilities.	Assessment undertaken by 2018	on-going	on-going	MME / MME
A12.2	Review and update the National Oil Spill Contingency Plan in close collaboration with relevant Government entities and industry stakeholders.	Review undertaken by 2018	on-going	on-going	MME / MME
A12.3	Undertake a gap analysis of the current environmental regulations applicable and relevant to all aspects and activities in the oil and gas exploration and production sectors.	Gap analysis completed by 2018	on-going	on-going	MME / MME
A12.4	Collaborate with relevant Government entities (such as those responsible for fisheries, the environment, and works and transport) to ensure harmonisation of the key regulatory instruments relevant to the oil and gas industry.	Meetings to commence by 2017	on-going	on-going	MME / MME
A12.5	Strengthen inter-ministerial working relationships with relevant Government entities, particularly the Ministry of Environment and Tourism, to facilitate the permitting and consultation processes required for oil and gas sector activities.	Meeting held at least once per year			MME / MME
A12.6	Develop and review integrated management and operational guidelines and standards for HSE in collaboration with industry.	Guidelines and standards developed by 2018	on-going	on-going	MME / MME
A12.7	Review international and regional HSE guidelines and practices to strengthen relevant national frameworks.	Review undertaken by 2018	on-going	on-going	MME / MME
A12.8	Strengthen inter-ministerial working relationships with relevant Government entities, particularly the Ministry of Labour, to ensure the health and safety of persons active in the country's oil and gas exploration and production sector.	Annual meeting at least once per year			MME / MME
<b>P13: Local Content and Participation</b>					
A13.1	In close collaboration with other Government entities, undertake a skills assessment and gap-analysis across the upstream oil and gas sector, and implement the recommendations.	Analysis undertaken by 2018	First findings implemented by 2019	on-going	MME / MME
A13.2	Develop and implement a framework to ensure that relevant capacity is systematically created across the country's oil and gas sector.	Framework developed by 2019	First findings implemented by 2020	on-going	MME / MME



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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
A13.3	Establish capacity building programmes in close collaboration with all relevant industry stakeholders and local and international training institutions.	Programmes developed by 2020	First training programmes implemented by 2022	on-going	MME / MME
A13.4	In close collaboration with other Government entities, develop and implement a local content and participation policy, and establish a monitoring unit.	Policy developed by 2020	Policy monitoring unit established by 2022	on-going	MME / MME
A13.5	Undertake an assessment of the oil and gas value chain to identify development opportunities.	Analysis undertaken by 2018	Promotion of opportunities to commence by 2020	on-going	MME / MME
A13.6	Engage with industry to identify suitable corporate social responsibility initiatives that address pertinent Namibian challenges.	First meetings to commence by 2017	on-going	on-going	MME / MME
<b>P14: Managing the Future</b>					
A14.1	Initiate a benchmarking study to assess available frameworks (transparency, accountability and equity) and best practices to manage oil and gas sector revenues to the benefit of the country's people.	Study undertaken by 2020	on-going	on-going	MME / MME
A14.2	Establish a petroleum fund for the social and economic development of future generations.	Stakeholder engagement to commence by 2018	Fund established and operational by 2022	on-going	MME / MME
A14.3	Collaborate with the Ministry of Finance, the Bank of Namibia, NPC and NAMCOR, and industry stakeholders to ensure the sustainable management of revenues from the oil and gas sector.	Meeting held at least once per year			MME / MME

### 3.3 Downstream Liquid Fuels Sector

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P15: Security of Fuel Supply</b>					
A15.1	Carry out benchmarking studies on the sources of supply of liquid fuels and other petroleum products, including on their economics, logistics, pricing, quality and other relevant aspects.	Studies initiated by 2017	on-going	on-going	MME / NAMCOR
A15.2	Develop a framework for local participation in a competitive downstream value chain.	Framework developed by 2018	on-going	on-going	MME / NAMCOR
A15.3	Investigate NAMCOR's role and capabilities as an actor in the fuel supply chain, including aspects related to importation, storage, distribution and supply.	Analysis completed by 2018	Findings implemented by 2022	on-going	MME / NAMCOR
<b>P16: Access to Petroleum Products</b>					
A16.1	Initiate a study to assess the status of and gaps in the access to petroleum products across the country, and develop a strategy to comprehensively enhance such access.	Study undertaken by 2018	Strategies implemented by 2020	on-going	MME / NAMCOR
A16.2	Promote the establishment of retail outlets and petrol stations in identified strategic locations to improve access to petroleum products across the country.	Strategic locations identified by 2017	Establishment of retail outlets and petrol stations initiated by 2018	on-going	MME / NAMCOR
A16.3	Promote and facilitate private-public partnership arrangements in the establishment of retail outlets in rural and outlying areas of the country.	Action plan developed by 2018	Promotion initiated by 2019	on-going	MME / NAMCOR
<b>P17: Expansion of Petroleum-related Infrastructure</b>					
A17.1	Carry out a study to examine the institutional and market constraints that continue to prevent full access to petroleum products in the country.	Study undertaken by 2018	on-going	on-going	MME/NAMCOR
A17.2	Facilitate public-private sector collaboration to expand product storage capacity.	Needs analysis undertaken by 2018	Implementation of recommendations by 2020	on-going	MME / NAMCOR
A17.3	Support NAMCOR to play a more meaningful role in ensuring adequate access, distribution and storage facilities.	First meetings held by 2017	on-going	on-going	MME / NAMCOR

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
A17.4	Initiate a study on the infrastructure needs to meet the targets set for a national strategic stock.	Study completed by 2018	Findings implemented by 2022	on-going	MME/NAMCOR
<b>P18: Refinery and Petrochemicals Hub</b>					
A18.1	Initiate a techno-economic and cost-benefit analysis to assess the requirements and implications of the establishment of a refinery and petrochemicals hub in the country.	Analysis completed by 2018	Findings implemented by 2022	on-going	MME / NAMCOR
A18.2	Facilitate investments in the construction and management of a refinery and petrochemicals hub, if viable.	First meetings initiated by 2017	on-going	on-going	MME / NAMCOR
A18.3	Engage with SADC member countries and other interested off-takers, and enter into agreements on the commitment to such a hub.	First meetings initiated by 2017	on-going	on-going	MME / NAMCOR
A18.4	Facilitate the reliable supply of crude oil to the refinery and petrochemicals hub, if viable.	First meetings initiated by 2017			MME / NAMCOR
<b>P19: Fuel Efficiency</b>					
A19.1	Initiate a study to assess the costs and benefits of different modes of transport for the efficient supply of petroleum products across the country.	Study completed by 2019	Findings implemented by 2021	on-going	MME / MME
A19.2	Liaise with relevant Government entities to upgrade the country's railway infrastructure for the efficient transport of petroleum products.	First meetings held by 2017	on-going	on-going	MME / MME
A19.3	Assess the viability and requirements of introducing mass transportation systems in the country.	Study completed by 2019	Findings implemented by 2022	on-going	MME / MME
A19.4	Initiate a national assessment to investigate the costs and benefits of introducing alternative fuels.	Study completed by 2019	Findings implemented by 2021	on-going	MME / MME
A19.5	Initiate a study to assess and implement suitable fuel efficiency standards for the public-sector fleet.	Study completed by 2020	Findings implemented by 2022	on-going	MME / MME
<b>P20: Petroleum Pricing</b>					
A20.1	Commission a study to determine a pricing mechanism that is best suited to the current market supply conditions.	Study completed by 2018, and implemented by 2020	n/a	n/a	MME / MME

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
A20.2	Review the subsidies for petroleum products to achieve specific national development objectives.	Study completed by 2020	Findings implemented by 2021	n/a	MME / MME
<b>P21: Market Growth and Development</b>					
A21.1	Develop operational guidelines and standards for health, safety, and the environment for the downstream liquid fuels sector, in accordance with international best practice.	Guidelines and standards developed by 2020	Dissemination on-going	n/a	MME / MME
A21.2	Investigate the establishment of a consolidated fund to pool resources to provide capital funding for projects in the downstream oil and gas sector.	Study completed by 2020	Findings implemented by 2021	n/a	MME / MME
A21.3	Investigate existing barriers that hinder the entry of local participants, and develop strategies to address these barriers.	Study completed by 2020	Findings implemented from 2021	on-going	MME / MME
A21.4	Develop capacity building programmes to enhance national petroleum trading, pricing, and other relevant skills necessary for the development of the sector.	Training implementation to commence by 2018	on-going	on-going	MME / MME

### 3.4 Downstream Gas Sector

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P22: Development, Commercialisation and Use of Natural Gas</b>					
A22.1	Ensure sufficient priority is given to the procurement, engineering, and construction of all components of the Kudu Gas-to-Power Project.	First meetings initiated by 2017	on-going	on-going	MME / NAMCOR
A22.2	Initiate a study to assess the viability, opportunities, and implications of establishing a national gas industry for local consumption and export to countries in the SADC Region.	Study undertaken by 2019	Findings implemented by 2022	on-going	MME / MME
A22.3	Facilitate and establish a funding mechanism to promote the development of the local natural gas sector.	Study undertaken by 2020	Mechanism in operation by 2022	on-going	MME / MME
A22.4	Investigate the options for the commercialisation and use of natural gas as an alternative fuel supply for the transport sector, and for domestic, commercial and industrial applications.	Study undertaken by 2020	Findings implemented by 2022	on-going	MME / MME
<b>P23: Legal and Regulatory Framework for a Local Gas Market</b>					
A23.1	Establish the legal, regulatory and technical frameworks required to establish a local gas market.	Frameworks established by 2020	Frameworks implemented by 2024	on-going	MME / MME
<b>P24: Cooperation and Trade with SADC Countries</b>					
A24.1	Initiate a regional study to identify and quantify the potential scale of the export of natural gas to the industrial markets in SADC countries.	Study carried out by 2019	Findings implemented by 2021	on-going	MME / MME
A24.2	Initiate a regional assessment to identify the legal, regulatory, financial and technical requirements, and the associated implications, of the cooperation and trade of natural gas between Namibia and SADC countries.	Assessment undertaken by 2020	Findings implemented by 2022	on-going	MME / MME
A24.3	Assess the terms, conditions and requirements to implement the existing Bilateral Gas Trade Agreement with South Africa.	Review undertaken by 2019	Findings implemented by 2021	on-going	MME / MME
A24.4	Promote Namibia's natural gas resources at regional and international platforms with a view to attracting investments.	Participate in promotion events at least once per year			MME / NAMCOR

### 3.5 Thermal Energy Sector

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P25: Bioenergy for Thermal and Electrical Applications</b>					
A25.1	Devise a National Bioenergy Roadmap, giving special emphasis to the development of the country's solid biomass resources, its organic municipal waste and biogas potentials, as well as the liquid fuel potential derived from different forms and uses of the country's bioenergy resource.	Roadmap developed by 2020	n/a	n/a	MME / MME
A25.2	Establish a conducive legal, fiscal and regulatory framework, and support the associated human and technical capacity development required for the sustainable use of the country's bioenergy resources for thermal and electrical applications across all relevant value chains.		Framework established by 2022	n/a	MME / MME
A25.3	Develop and implement a programme to disseminate efficient appliances for thermal household use to support the drive towards country-wide access to modern energy.	Programme developed by 2019, programme implementation to commence by 2020	on-going	on-going	MME / MME
A25.4	In collaboration with relevant Government entities and the private sector, assess the necessary requirements for and potential resultant micro-economic impacts of the establishment of value chains that support the productive use of the country's encroacher bush resource.	Assessment completed by 2020	on-going	on-going	MME / MME
A25.5	Initiate a programme to assess and quantify the costs and benefits of establishing national biofuels capacities, and determine the legal, regulatory and technical aspects required to establish a local biofuel industry.		Study completed by 2022		MME / MME
A25.6	Develop a National Biofuels Policy, placing special emphasis on rural job-creation through the systematic development of biofuels and associated value chains.		Policy developed by 2025		MME / MME
A25.7	Support research and development efforts to strengthen linkages between the agriculture and manufacturing sectors for the productive use of the country's bioenergy potentials.	First R&D programme launched by 2020	on-going	on-going	MME / MME

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P26: Solar Thermal Applications</b>					
A26.1	Create the necessary systems and processes to ensure that solar thermal water heaters are installed in all Government-financed and subsidised building programmes and related infrastructure developments.	Requirements ratified by 2018	on-going	on-going	MME / MME
A26.2	Facilitate collaborative efforts between all relevant Government entities and private stakeholders to implement solar thermal solutions in projects financed or supported by public funding.	Inter-ministerial engagements initiated by 2018	on-going	on-going	MME / MME
A26.3	Develop and implement a consumer awareness programme focusing on the benefits and opportunities of solar thermal appliances.	Programme to commence by 2018	on-going	on-going	NEI / MME
A26.4	Develop a programme to phase out electric and other non-solar water heaters in favour of solar water heaters.	Programme developed by 2018, implemented from 2020.	on-going	on-going	NEI / MME
A26.5	Commission a study to assess the potential, requirements, and economic implications of targeted incentives to unlock private investments in the development, and local manufacturing and/or assembly of solar thermal technologies and related applications.	Study completed by 2020	Implement recommendations by 2022	on-going	NEI / MME
A26.6	Commission feasibility studies to assess the potential, costs, benefits, and national economic implications of using solar thermal technologies, including, but not limited to, electricity generation, solar thermal storage, and desalination of sea water.	Studies completed by 2020	Recommendations implemented by 2022	on-going	NEI / MME
<b>P27: Geothermal Applications</b>					
A27.1	Undertake a preliminary resource assessment of the country's geothermal energy resources to determine the resource potential with sufficient confidence to take a decision on whether to further pursue developments.	Resource assessment completed by 2021	n/a	n/a	MME / Grant
A27.2	Assess how private-public partnerships, Independent Power Producers, and/or institutional investors can best support the exploration and development of Namibia's geothermal potential.		Support provisions and capacity allocations in place by 2022	n/a	MME / MME

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P28: Thermal Energy Applications</b>					
A28.1	Develop relevant legal and regulatory provisions, as deemed necessary, to formalise the country's thermal energy sector.		Legal and regulatory provisions in place by 2022	on-going	NERA / MME
A28.2	Assess the requirements and contributions by Government, as well as the associated costs and benefits to the country, should a local thermal industry be established.		Assessment completed by 2024		MME / MME
A28.3	Commission a national study to investigate the potential scale and scope of applications of thermal energy technologies in the domestic, commercial, and industrial sectors.	Study completed by 2021			MME / MME
A28.4	Establish the standards, certification, and quality assurance requirements, where viable, to formalise and incentivise the uptake and use of thermal energy appliances and technologies in the domestic, commercial, and industrial sectors.		Standards in place by 2025		NERA / MME
A28.5	Commission a public awareness drive to communicate the most cost-effective applications and uses of thermal energy technologies and devices, including, but not limited to, fuel-efficient stoves and switching from electric to liquid petroleum gas stoves or solar cookers, and to focus on the day-to-day thermal energy requirements of domestic end-users.	Consumer awareness campaign to commence in 2018	on-going	on-going	NERA / MME



### 3.6 Cross-Cutting Themes

Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P29: Rural and Urban Household Access to Energy</b>					
A29.1	Develop a national household energisation policy and household energisation master plan, fully integrating grid, off-grid, and non-electricity energisation methods, with an accompanying funding framework, and commence with the implementation of the master plan as soon as possible.	Policy developed by 2018, master plan by 2019, implementation started by 2020	on-going	on-going	MME / MME
A29.2	Develop an institutional framework and models for off-grid electricity and non-electricity energy services; include the consideration of integrating these with established grid-based institutions, and place specific focus on unlocking business opportunities in bringing energy services to rural Namibia.	Framework implemented by 2020	n/a	n/a	MME / MME
A29.3	Assess how third-party investments in rural energy provision, including private sector investors, Independent Power Producers, donors, and development agencies, can contribute to enhance the provision of and access to modern energy, and implement plans to facilitate such investments.	Assessment completed by 2019	Findings implemented by 2022	n/a	MME / MME
A29.4	Develop and implement a consumer awareness programme to encourage the adoption and productive use of efficient modern energy service options that improve the affordability of such services.	Programme implemented from 2019	on-going	on-going	NEI / MME
<b>P30: Rural Institutional and Commercial Access to Energy</b>					
A30.1	While devising the household energisation policy and master plan, update the rural electricity distribution master plan for the concurrent provision of modern efficient energy services for Government institutions and businesses to ensure that energy services for productive use are brought to where the people are.	Master plan updated by 2019, implementation started by 2020	on-going	on-going	MME / MME
A30.2	Develop and implement a training programme to enable local communities to participate meaningfully in the provision of rural energy services.	Programme operational by 2020	on-going	on-going	MME / MME
A30.3	Engage with relevant ministries and agencies to achieve direct involvement in all matters relating to rural development, with the aim of including energy service provision in rural development planning, and for maximum economic benefit.	Engagement established by 2018	on-going	on-going	MME / MME

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P31: Environmental Considerations</b>					
A31.1	Develop the required framework conditions to incentivise investments in environmentally friendly energy technologies and practices.	Framework developed by 2020	n/a	n/a	MME / MME
A31.2	In close collaboration with the relevant Government entities responsible for environmental pollution control, develop a compliance mechanism to manage environmental pollution in the energy industry.	Mechanism developed by 2020	n/a	n/a	MME / MME
A31.3	Develop a strategy to foster a culture of environmental stewardship across the country's energy sector.	Strategy developed by 2019, implementation on-going	n/a	n/a	MME / MME
A31.4	Formulate a national energy roadmap to incentivise environmentally friendly investments and growth.	Roadmap developed by 2020	n/a	n/a	MME / MME
A31.5	Develop appropriate rehabilitation and disposal rules and practices that address the energy sector's multiple requirements.	Practices and rules developed by 2020	on-going	on-going	ECB / ECB
A31.6	Report annually on the environmental impacts and mitigation measures within the country's energy sector.	Reporting to commence by 2019	on-going	on-going	MME / MME
<b>P32: Energy as an Integral Part of National Development Planning</b>					
A32.1	Engage with all entities responsible for national development planning regarding the full inclusion of energy issues and matters relating to energy provision in all national development planning activities and development budgeting.	Engagement established by 2018	on-going	on-going	MME / MME
A32.2	Engage with all relevant entities to ensure that all Government housing initiatives are co-ordinated representatives of the energy industry, and that standards, timelines, and funding for energy services are, prior to their implementation, agreed on.	Engagement established by 2018	on-going	on-going	MME / MME
A32.3	Establish systems and structures for integrated energy planning.	Structures established by 2019	n/a	n/a	MME / MME
A32.4	Monitor all energy-related projects during and following their implementation.	on-going	on-going	on-going	MME / NPC

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P33: Energy Resource and Consumption Data and Information</b>					
A33.1	Identify, appoint, capacitate and resource a national custodian, taking the NSA's mandate into account, for the collection, aggregation, quality assurance, and compilation of energy resource, energy consumption and energy management data. Ensure that this national custodian makes such data and information publicly available.	Custodian active by 2018	on-going	on-going	MME / MME
A33.2	Ensure that the national energy data custodian compiles an annual State of Energy Report, and makes all relevant energy subsector reports and energy resource data available to support national planning, investment, commercial and research activities.	Official reporting to commence by 2019	on-going	on-going	MME / MME
A33.3	Develop appropriate legal provisions to mandate the national energy data custodian to collect relevant energy resource data from stakeholders without compromising any commercially sensitive and/or competitive business information.		Provisions in place by 2020	on-going	MME / MME
<b>P34: Transparency and Good Governance</b>					
A34.1	Investigate joining and participating in national, regional and international initiatives that promote the introduction and application of relevant transparency and good governance arrangements across the energy sector.	Study undertaken by 2018	Findings implemented by 2020	on-going	MME / MME
A34.2	Initiate training of all staff responsible for the administration of energy sector legislation and policies on contemporary transparency and good governance practices.	Initial training seminars undertaken in 2017	on-going	on-going	MME / MME
A34.3	Engage with all relevant stakeholders to enhance transparency and governance arrangements required to promote investments in the energy sector.	First meetings initiated by 2017	on-going	on-going	MME / MME
<b>P35: Economic Empowerment</b>					
A35.1	Identify the barriers that prevent or limit the economic empowerment of previously disadvantaged Namibians (PDNs) across the energy sector, and formulate strategies on how these can be addressed.	Study undertaken by 2017	Strategy implemented by 2018	On-going monitoring and evaluation	MME / MME
A35.2	Identify suitable private sector incentives to advance broad-based economic empowerment throughout the energy sector.	Study undertaken by 2017	Private sector engagements to commence by 2018	on-going	MME / MME

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
A35.3	Provide capacity building initiatives for previously disadvantaged Namibians to ensure meaningful participation across the energy sector.	Initial training seminars undertaken in 2017	on-going	on-going	MME / MME
A35.4	Create an awareness of the available opportunities for previously disadvantaged Namibians in the energy sector.	Study undertaken by 2017	on-going	on-going	MME / MME
A35.5	Engage with local and regional authorities to encourage the participation of communities, co-operatives, and micro, small and medium enterprises in the energy sector.	First meetings initiated by 2017	on-going	on-going	MME / MME
A35.6	Investigate financing mechanisms / funding resources to enable the participation of previously disadvantaged Namibians in the energy sector.	Study undertaken by 2017	Findings implemented by 2018	on-going	MME / MME
<b>P36: Mainstreaming Gender, Youth, and Persons with Disabilities</b>					
A36.1	Provide training for women, youth, and persons with disabilities to enable their meaningful participation in the energy sector.	Initial training seminars undertaken in 2017	on-going	on-going	MME / MME
A36.2	Initiate awareness raising measures on gender equality and equity across the energy sector, including the identification of opportunities for the participation of women, youth, and persons with disabilities.	Initial promotion events undertaken by 2017	on-going	on-going	MME / MME
A36.3	Identify the barriers that prevent or limit the participation of women, youth, and persons with disabilities in the energy sector, and formulate strategies on how these can be addressed.	Study undertaken by 2017	Strategy implemented by 2018	On-going monitoring and evaluation	MME / MME
<b>P37: Capacity Development</b>					
A37.1	Conduct a skills and capacity needs analysis focusing on the various facets of the energy sector, and develop a strategy to address the identified gaps.	Study undertaken by 2017	Findings implemented by 2018	on-going	MME / MME
A37.2	Identify and liaise with relevant local and international institutions to develop the capacity of local tertiary, vocational, technical, and related institutions in all aspects relevant to the country's energy sector.	Relevant institutions identified by 2017	Institutions identified by 2018	on-going	MME / MME
A37.3	Encourage the public and private sector and academia to undertake capacity development in all facets of the energy sector, including the provision of internships and on-the-job training.	First meetings initiated by 2017	on-going	on-going	MME / MME

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Ref No.	Action Description	Short-Term Target 2017-2020	Medium-Term Target 2017-2025	Long-Term Target 2017-2030	Responsible for Action / Funding
<b>P38: Consumer Awareness</b>					
A38.1	Identify and appoint a national custodian responsible for raising awareness of the country's energy users regarding relevant energy matters.	Study undertaken by 2017	National custodian operational by 2018	on-going	MME / MME
A38.2	Initiate an assessment to identify the most important gaps in consumer awareness concerning energy consumption and use, and formulate relevant strategies to address these.	Study undertaken by 2017	Findings implemented by 2018	on-going	MME / MME
A38.3	Encourage the public and private sector to participate in all aspects relating to the enhancement of Namibian consumer's energy awareness.	First meetings initiated by 2017	on-going	on-going	MME / MME
<b>P39: Energy-related Research, Development, and Innovation</b>					
A39.1	Investigate the costs, benefits, and implications of the establishment of a dedicated fund to support energy-related research, development, and innovation.	Study undertaken by 2018	Findings implemented by 2020	on-going	MME / MME
A39.2	Engage with relevant stakeholders to identify gaps and opportunities that can be addressed through the targeted support of research, development, and innovation.	First meetings initiated by 2017	on-going	on-going	MME / NCRST
<b>P40: Regional and International Cooperation</b>					
A40.1	Identify regional and international opportunities for the advancement of the country's energy sector, and engage with relevant entities and institutions.	First meetings initiated by 2017	on-going	on-going	MME / MME
A40.2	Support cross-border collaboration with SADC and AU partner states.	First meetings initiated by 2017	on-going	on-going	MME / MME
A40.3	Initiate, support and facilitate the training and capacity development of persons responsible for the promotion of regional cooperation and energy trade.	Initial training seminars undertaken by 2017	on-going	on-going	MME / MME
A40.4	Develop strategies to reduce regional energy trade barriers.	Strategy options developed by 2018	Strategies implemented by 2020	on-going	MME / MME
A40.5	Improve the availability of information relevant for the effective support of regional energy trading opportunities and energy-related investments.	Initial information material compiled by 2018	on-going	on-going	MME / MME