



Zimbabwe

National energy Efficiency Policy

2025

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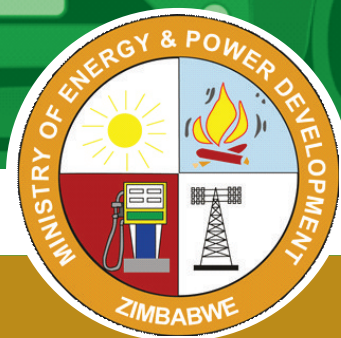


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President of the Republic of Zimbabwe



Zimbabwe

MINISTRY OF ENERGY AND POWER DEVELOPMENT



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FOREWORD

The two core pillars of sustainable energy development are energy efficiency and renewable energy. Energy efficiency focuses on use of less energy to produce the same output or provide same service. This can be achieved by using novel and better technologies, optimizing industrial processes, improved building designs and consumer awareness among other interventions.

Zimbabwe is committed to advancing energy efficiency by promoting and implementing policies that support energy-saving technologies. The Vision of the Ministry is to achieve universal access to clean, affordable, and reliable energy for all by 2030. Embracing energy efficiency is essential to realizing this vision, as it not only reduces costs but also contributes to our commitments under the Nationally Determined Contributions (NDCs) submitted to the United Nations Framework Convention on Climate Change (UNFCCC). This also aligns seamlessly with our National Development Strategy (NDS1), which envisions robust economic growth supported by high levels of energy efficiency and sustainable energy supply. As such, Government is fully dedicated to achieving the Sustainable Development Goals (SDGs), particularly SDG 7, which seeks to double the global rate of improvement in energy efficiency.

Zimbabwe is embracing the opportunity to tackle the power challenges faced within the SADC Region, highlighting the vital role of energy efficiency in advancing our socioeconomic and environmental goals. This policy has been crafted at a pivotal moment, allowing us to effectively balance electricity supply with demand.

Currently, our energy intensity rating indicates that Zimbabwe has room for improvement in energy consumption per unit of GDP. As such implementing energy-efficient measures in our productive and commercial sectors holds tremendous potential for reducing consumption and generating significant cost savings.

The country is focusing on increasing the adoption of renewable energy sources and adoption of smart technologies for enhanced energy management

including the internet of things (IOT). Governments and organizations worldwide are increasingly adopting regulations and incentives that promote sustainable practices and reduce carbon footprints. Regulations to encourage efficient use of energy including the adoption of ISO50001 in industry will be promulgated.

Recent studies have revealed that over 2.3 Billion people in the world lack access to clean cooking facilities with nearly a 1 billion of these in Africa. The Zimbabwe Government is prioritizing investments in cooking infrastructure and implementing policies that enable access to affordable and sustainable cooking solutions for our citizens. In that regard, a clean cooking strategy will be implemented.

The country is also re-purposing and modernizing traditional coal-fired and hydro-power plants to create a more sustainable and reliable energy supply base. Energy efficiency is crucial for conserving our available power supply, allowing us to effectively address the demand-supply gap through virtual power capacity.

This policy aims to encourage the adoption of energy efficient technologies and practices in the residential, commercial, mining, transport and agriculture sectors. Countrywide awareness programmes to improve understanding of how simple changes in habits and practices can lead to energy conservation and environmental benefits will be pursued. Adoption of minimum energy performance standards and regular energy audits will also be encouraged. Training, capacity building and research and development are also proposed in the policy.

Zimbabwe is ready to implement this policy and adopt successful practices, trends, and technologies from around the world. As we strive to become an upper middle-income society by 2030, let's work together to minimize unnecessary energy losses across all value chains in our economy.

ACKNOWLEDGEMENTS

The formulation of the National Energy Efficiency Policy involved a broader consultative process of a wide spectrum of stakeholders. Appreciation goes to the various organisations and resource persons who contributed in multiple ways in the development of the policy document. Special mention goes to the British Government and the United Nations Development Programme (UNDP) for the financial and material support rendered during the process.

I also wish to congratulate Ministry of Energy and Power Development staff, Permanent Secretaries of line Ministries together with their staff, not leaving out all State-Owned Enterprises and other development partners who facilitated consultations around the

country as well as shaping the document to make it meaningful.

The Government of Zimbabwe looks forward to the continued support towards successful implementation of this Policy. Together, we can pave the way for a sustainable future, enhance energy supply security, reduce our environmental impact, and enhance economic growth towards an “Empowered Upper Middle-Income Society by 2030” and beyond. Let’s take action today for a brighter, more efficient tomorrow.

Lastly, let me extend my gratitude to industry and all other stakeholders who are ready and willing to take necessary steps towards efficiency for competitive and sustainable products and service

EXECUTIVE SUMMARY

Understanding the country's emerging energy efficiency, renewable energy industry, market development, and growth is critical to realising the country's potential and scaling up investment opportunities. The availability of profound data and information is crucial in enabling informed decisions on actions to overcome the pertinent energy inefficiencies and climate change challenges. Addressing these challenges by fostering economy-wide cooperation accelerates results and triggers growing sustainable energy markets. Undoubtedly, the energy sector has been consistently increasing, with many new technologies being identified, developed and used.

As recognised by the National Energy Policy of 2012, Energy Efficiency measures can scale down capital investment needed to provide additional energy or power plants. Power demand is expected to increase as the economy grows, rural electrification programmes continue to be accelerated, and the rolling out of grid-connected electrification of rural areas. Rapidly the ageing infrastructure and inefficient use by end users are expected to exacerbate the problem of inadequate electricity supply. Energy Efficiency measures can make the energy industry more efficient, less polluting and gender-inclusive, improving the delivery of public services through reduced electricity costs, especially for large consumers. Creating skills in energy efficiency can generate jobs, foster gender-inclusive economic growth and is vital in mitigating climate change. In recognition of the climate change issues, there is a need to double the efforts towards energy efficiency, regarded as the country's first fuel. The Government recognises the need to instate proper training and sensitisation of people on energy efficiency that will go a long way in realising the benefits of energy efficiency within the energy sector and the whole economy.

The policy calls for the uptake of energy efficiency measures that will span across all sectors of the economy and is the base policy for other subsector areas like industries, commercial sector, households

and transport sectors. This policy is aligned to other relevant national policies, regulatory and statutory instruments, regional and global strategies and action plans to ensure that development needs, country operations and priorities are tailored towards energy efficiency. The policy implementation should be given primary consideration. It should be integrated and mainstreamed into all economic, government and project development planning processes. Proper coordination mechanisms should be implemented so that the policy achieves its purpose in time.

The policy aims to achieve several goals, including reducing energy consumption, establishing energy efficiency data, providing financing for energy efficiency projects, promoting establishment and growth of Energy Servicing Companies (ESCOs), offering incentives for the sector, implementing a regulatory framework, and mandating Energy Efficiency standards, labels and codes. This policy aims to attain energy efficiency in all sectors of the economy and society. The primary objectives of the policy are:

1. **Promote energy use reduction across all sectors:** Establish an integrated strategy to significantly reduce energy consumption in residential, commercial, industrial, transport, and agricultural sectors, ensuring effective socio-economic development.
2. **Foster ESCO development and technological innovation:** Encourage the establishment and growth of Energy Service Companies (ESCOs) to drive investment in energy efficiency initiatives, while supporting the development of local energy-efficient technologies and enhancing capacity through standards, codes practice, and specifications for equipment and systems.
3. **Advance environmental and social goals:** Contribute to greenhouse gas emission reductions while integrating gender, economic, environmental, and safety considerations into energy efficiency initiatives and promoting international cooperation.

¹Source: World Bank and IRENA

4. **Create an enabling environment for financing energy efficiency:** Foster access to local, regional, and international funding and financial mechanisms for energy efficiency activities, projects, and programs, while establishing robust research, databases, and statistics to inform decision-making and track progress.

The policy aims to reduce the current energy intensity of 15¹ megajoules per GDP PPP to the global average target of 3.4 megajoules per GDP PPP by the year 2030 in order to achieve the SDG 7.3 target. This target calls for concerted efforts to address all inefficiencies within our productive economic sectors through investing in processes, equipment, technologies and

behaviours that reduce energy consumption to improve productivity and competitiveness. Implementing an economy-wide energy audit policy across all productive sectors will provide crucial baseline information to enhance the country's energy efficiency framework, strategy, and implementation plan.

LIST OF ABBREVIATIONS

ADA	Austrian Development Agency
AFD	Agency Française de Développement
AFSTS	Agriculture Food Systems and Transformation Strategy
BCSDZ	Business Council for Sustainable Development
CBO	Community-Based Organisations
CEA	Certified Energy Auditors
CEM	Certified Energy Managers
CMVP	Certified Measuring and Verification Professionals
CSR	Corporate Social Responsibility
CO₂	Carbon Dioxide Gas
CZI	Confederation of Zimbabwe Industries
DFID	Department for International Development
DSM	Demand Side Management
ECM	Energy Conservation Measures
EE	Energy Efficiency
EEPMDS	Energy Efficiency Performance Management Development System
EISAZ	Engineering Iron and Steel Association of Zimbabwe
EnMS	Energy Management System
ESCO	Energy Service Company
ESPC	Energy Service Provider Companies
EU	European Union
FCDO	Foreign, Commonwealth Development Office
GCF	Green Climate Fund
GDPPP	Gross Domestic Product Purchase Power Parity
GEF	Global Environmental Facility
GNI	Gross National Income
IDBZ	Infrastructure Development Bank of Zimbabwe
GHG	Green House Gases
GoZ	Government of Zimbabwe
GRB	Gender Responsive Budget
IDCZ	Industrial Development Corporation of Zimbabwe
IPP	Independent Power Producer
IRBM	Integrated Results Based Management
IRENA	International Renewable Energy Agency
IT	Information Technology
IE3	Premium Efficiency standard Motors Standard Class 3
Ktoe	Kilotons of oil equivalent
MDBs	Multilateral Development Banks
MoMMD	Ministry of Mines and Mining Development
MECTHI	Ministry of Environment, Climate Tourism, and Hospitality Industry
MEPS	Minimum Energy Performance Standards
MHTESTD	Ministry of Higher and Tertiary Education Science & Technology Development
M&V	Measuring and Verification

NBfP	National Biofuels Policy
NDBs	National Development Banks
NDC	Nationally Determined Contribution
NDS	National Development Strategy
NEEA	National Energy Efficiency Audit
NEEP	National Energy Efficiency Policy
NEP	National Energy Policy
NGOs	Non-Governmental Organisation
NORAD	Norwegian Agency for
NREP	National Renewable Energy Policy
PPA	Power Purchase Agreement
PPP	Purchase Price Parity
REAZ	Renewable Energy Association of Zimbabwe
REEESAP	Renewable Energy and Energy Efficiency Strategy & Action Plan 2016-2030
SACREEE	Southern Africa Centre for Renewable Energy and Energy Efficiency
SADC	Southern African Development Community
SAZ	Standards Association of Zimbabwe
SDG	Sustainable Development Goal
SIEEP	SADC Industrial Energy Efficient Program
SIRDC	Scientific and Industrial Research and Development Centre
SME	Small to Medium Scale Enterprise
SOLTRAIN	The Southern African Solar Thermal Training & Demonstration Initiative
tCO₂e	Tonnes carbon dioxide equivalent
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organisation
USA	United States of America
USAID	United States Agency for International Development
UZ	University of Zimbabwe
ZACE	Zimbabwe Association of Consulting Engineers
ZENT	Zimbabwe Electricity Supply Authority Enterprises
ZERA	Zimbabwe Energy Regulatory Authority
ZESA	Zimbabwe Electricity Supply Authority
ZETDC	Zimbabwe Electricity Transmission & Distribution Company
ZIMCHE	Zimbabwe Council for Higher Education
ZIMDEF	Zimbabwe Manpower Development Fund
ZIMRA	Zimbabwe Revenue Authority
ZIMSTAT	Zimbabwe National Statistical Agency
ZNCC	Zimbabwe National Chamber of Commerce
ZPC	Zimbabwe Power Company

COUNTRY OVERVIEW

1.1. OVERVIEW

Zimbabwe is a landlocked country situated at the centre of Southern Africa. It is bordered by Botswana 813 km to the west, Mozambique 1,231 km to the east, South Africa 225 km to the south, and Zambia 797 km to the north. Harare, and Bulawayo, are the major cities in Zimbabwe. In terms of climatic conditions, the country has a tropical climate moderated by altitude (comparatively high at an average elevation of 961 meters above sea level) and a rainy season from November to March though there are traits of shifting because climate change. Its terrain is mostly a high plateau with a higher central plateau (high veld) and some mountains in the east.

1.2. DEMOGRAPHICS

According to the ZimStat National Census of 2022, the population size of Zimbabwe is estimated at 15.2 million people, of which 7.3 million (48 per cent) are male and 7.9 million (52 per cent) are female. The annual population growth rate is estimated to be 1.5

per cent. There are 3,82 million households, averaging four persons per household. Zimbabwe has a land area of 390,757 square kilometres, resulting in a population density of 39 persons per square kilometre. 61.4 per cent of the population lives in rural areas compared to 38.6 per cent in urban areas

1.3. ECONOMY

Zimbabwe's GDP has been steadily increasing over the years. GDP growth is projected to grow to 3.2 per cent in 2023 and 2024, anchored mainly by agriculture, mining, and services under a tightened monetary and fiscal policy expected to increase macroeconomic stability. Inflation is projected to ease further, to 132.2 per cent in 2023 and 36.1 per cent in 2024, supported by economic stability, favourable commodity export prices and increased remittances subject to evolving global dynamics. However, the uncertain global economic outlook due to geopolitical tension coupled with climatic shocks, power shortages, and exchange rate volatility remain significant risks. The table below displays several key economic indicators that hold historical significance.

Table 1: Zimbabwe Key Economic Indicators (Source: World Bank, 2023)

METRIC	2017	2018	2019	2020
Population (millions)	14.02	14.21	14.55	14.83
Population Growth rate (%)	2.04	2.02	1.99	2.03
GDP (billion US\$)	17.58	34.16	21.83	21.51
GDP per Capita PPP (US\$K)	1.19	2.27	1.42	1.37
CO ₂ Emissions Per Capita (Metric Ton)	0.663	0.735	0.663	0.53

UNIT OF MEASURE	2014	2015	2016	2017	2018	2019	2020
Energy Intensity (MJ/US\$ GDP PPP)	10	10	10.5	9.5	9.8	10.5	10
Access to Electricity (% population)*	35	37	42	43	45	48	53
Access to Clean cooking (% population)	30	30	30	30	30	30	30
Renewable Energy (% Total Final Energy Consumption)	80	81	82	83	79	82	81
Per capita electricity generation (kWh)	-	700	500	580	670	650	450

The Zimbabwean economy is projected to grow by 5.4 per cent (a target envisaged in National Development Strategy 1), in line with becoming an upper-middle-income country by 2030. The growth is expected to be sustained mainly by mining, agriculture, tourism and construction industries, premised on the following expectations:

- Global economy slows down.
- Good and favourable international commodity prices
- Normal to above normal rainfall
- Reliable and stable power supply
- Favourable fiscal policies.

1.4. ENERGY OVERVIEW

Consistent and sustainable energy provision is a crucial determinant of the well-being of any economy. Zimbabwe has large coal reserves and significant solar, biomass and hydropower potential. The Government is committed to the development and adoption of sustainable energy technologies to ensure efficient production and utilization of energy resources in the country. The energy sector is regulated through the Energy Regulatory Authority Act [Chapter 13:23] of 2011, read together with the Electricity Act No. 4 of 2002 [Chapter 13:19], the Petroleum Act [Chapter 13:22] of 2006 and subsequent amendments.

1.4.1. The Electricity Sector

Government-owned power entities operate and manage five power stations, dominating the electricity supply, carrying out the system/network operator function, operating the transmission and distribution

networks, and conducting trade regionally through the Southern African Power Pool (SAPP). Some independent power producers also operate through production for their consumption or trading. The country has two major power generators, Kariba Hydropower Station, with an installed generation capacity of 1,050 megawatts and Hwange Thermal Power Station, with an installed generation capacity of 1,520 megawatts. The country also has some other small thermal power stations in Bulawayo, Harare and Munyati that are relatively small and have an installed generating capacity of 300 megawatts. These are, however, frequently out of service due to ageing equipment and other related challenges. Due to the challenges the power plants are going through the process of dissolution.

The generated power is transmitted through the national grid with an estimated 4 per cent transmission loss and 14 per cent distribution loss. The country has adopted net metering and absorption of power from renewable sources. According to the ZIMSTAT National Census of 2022, the electricity access rate in households is 62 per cent, with 38 per cent contribution from the main grid.

1.4.2. Petroleum Sector

Zimbabwe imports 100 per cent of its petroleum fuel requirements through pipeline, rail and road, with a peak daily demand of 2 million litres of petrol, 3 million litres of diesel, 190,000 litres of Jet A1 and 165 tonnes of Liquefied Petroleum Gas (LPG). The petrol is blended

with ethanol up to a blending level of 20 per cent (E20), depending on the season and availability.

*** According to the ZIMSTAT National Census of 2022, the access rate of electricity in households is 62 per cent and 38.7 per cent has access to clean cooking technologies.**

1.4.3. Biomass

According to the ZIMSTAT National Census of 2022, 60.7 per cent of the people in Zimbabwe use firewood for cooking. 38.7 per cent have access to clean cooking technology. Nationally an estimated 6 million tonnes or more of fuelwood are consumed annually, while the sustainable output of natural forests is 4.6 million tonnes. This means the country is losing 330,000 ha of forest area – over 60 million trees – a year, yet the current planting rate is only 10 million trees. The country has the potential to use clean cooking technologies such as biogas, efficient cookstoves and electricity. Analysis of the availability and use of biomass resources is crucial if biomass energy is to be used sustainably. There is need for the policy to advocate for a clean cooking strategy.

1.4.4. Renewable Energy

The Government values the sustainable impact of renewable energy resources within the country's

electricity access matrix and continues to take a leading role in promoting increased uptake and investment in renewable energy technologies as guided by the United Nations Sustainable Energy for All (SE4ALL) initiative. The vast array of renewable energy resources that can be tapped into at various levels includes solar photovoltaic, biomass (bagasse and forest waste), geothermal, large and small hydropower plants and wind. The Renewable Energy Policy (REP) sets overall targets for renewable energy in the country based on the Nationally Determined Contributions (NDCs) as one of its primary objectives. These interventions align with the United Nations Framework Convention on Climate Change (UNFCCC), demand-supply scenario, grid absorption capacity, and the ability of utilities to pay for renewable energy electricity. The REP aims to achieve an installed renewable energy capacity of 1,100 MW (excluding large hydro) or 16.5 per cent of total electricity supply, whichever is higher, by 2025 and 2,100 MW or 26.5 per cent of total electricity supply, whichever is higher, by 2030. These targets will enable the country to meet the current and projected energy supply deficit and the GHG emissions reduction objectives as per the NDCs submissions.

DOCUMENT		PROVISION FOR ENERGY EFFICIENCY
Policies	Energy Policy 2012	- Spells out the need for energy efficiency policy, targets and measures - Need for energy efficiency in the demand and supply side - Mentions sustainability and energy efficiency (page 20)
	National Renewable Energy Policy 2019	- Clean cooking - Efficient energy sources
	Biofuels Policy of Zimbabwe 2019	- Feedstock Conversion efficiency - Feedstock production policy guidelines - Research dedicated to continual improvement of efficiency
	Industrial Development Policy 2019	- Financial incentives for energy efficiency - Promote energy efficiency awareness - Encourage the use of energy efficiency practices in the sector - Public-private sector partnerships - application of technology in energy use management
	National Environmental Policy	- Provide economic instruments to improve resource and energy efficiency - Promote the use of clean energy sources
Statutory or regulatory Instruments	Energy Regulatory Authority Act	Licensing: the best standards for obtaining the highest energy efficiency from the source in question (All licensees in the sector)
	Inefficient lighting products ban and labelling regulations	- Minimum energy performance standards in the first schedule - Prohibited or banned lighting products with a power factor <55 and 0.9 - Emphasises testing standards - Energy labelling
	Solar Water Heating Regulations	Encourages use of solar water heaters over conventional electricity geysers

1.4.5. Current Policies and Legislation

2. ENERGY EFFICIENCY AND CONSERVATION IN ZIMBABWE

2.1. ENERGY EFFICIENCY OVERVIEW

According to the World Bank, Zimbabwe's energy intensity in 2023 was reported at 15 MJ per United States Dollar (USD) Purchase Price Parity (PPP) of Gross Domestic Product (GDP). This makes the country one of the top 3 worst performers in the SADC. The country has a long way to go if it intends to reach the global best practice figure of 3.4MJ per GDP PPP.

The country presents vast opportunities for energy efficiency and productive use of energy in its economic sectors with the potential to save energy on the generation, supply and demand side. More effort is needed to realise significant benefits in the form of offset investments in new plant capacity and improvement in the supply situation. There is a lack of sufficient data to establish fourth-tier energy savings through the use of more efficient technologies, switch in fuels, and change of habits and processes; hence, the potential energy savings are underestimated. As such, previous studies have reported national figures based on 1st tier indicators. Energy efficiency in industry and commercial sectors is hampered by a combination of a lack of awareness and capacity to establish the potential energy savings and difficulties in accessing financing to implement the measures. The power infrastructure and equipment in the industrial, mining, transport and agricultural sectors are to a larger extent, old and inefficient. The majority of appliances in the domestic sector are energy inefficient, and this is thought to contribute to the current low energy efficiency levels.

2.2. ENERGY CONSERVATION

Limiting current energy demand and gradually reducing it towards a sustainable level of consumption is a key component of any strategies and pathways to reach the climate target, particularly carbon neutrality. Given the stringency and urgency of the climate target and the current increase in energy demand, in addition

to investments in energy efficiency technologies, there is a need for a change in energy end-users' behaviour and lifestyle to obtain additional energy savings by limiting the demand for services. Practices focusing on energy conservation and sufficiency principles complement efficiency policies, particularly those aiming to change end-user consumer behaviour and lifestyle by imposing some limitations on the demand for energy services. This policy recognises and supports the various energy conservation (EC) dynamics in end-use sectors to reduce the growth in national energy demand and conserve energy resources produced in the country and elsewhere without inhibiting beneficial economic growth. Energy conservation aims to reap the multiple socio-economic and environmental benefits associated with energy conservation within the country. EC measures can contribute to preserving natural biomass resources and mitigating deforestation and climate change by reducing wood harvesting for fuel from indigenous forests. This policy supports the rationale that energy conservation when integrated into various EE policy provisions, will contribute to gender mainstreaming and recognition of women's role in the rural development context and local communities. Above all it aims at energy use reduction.

2.3. TECHNOLOGY TRANSFER FOR ENERGY EFFICIENCY

This policy support regional capacity building and technology transfer efforts towards provision of technical services for leapfrogging to energy-efficient appliances and equipment through regulatory and financing mechanisms. The main objectives being to improve the country's programming process regarding energy efficiency equipment and appliances. The policy supports programmes to establish mandatory Minimum Energy Performance Standards (MEPS) and a labelling scheme, which will create an enabling policy and regulatory environment. This will transform markets and uptake of energy-efficient equipment and appliances to ultimately reduce the strain on the electricity grid, increase household disposable income and potentially reduce greenhouse gas (GHG) emissions.

2.4. SUPPORT FOR ENERGY EFFICIENCY

Zimbabwe currently faces critical challenges to achieving market transformation towards energy-efficient products, including a lack of information and awareness, limited labelling of appliances, and an absence of minimum energy performance standards. The Government supports the development of successful energy efficiency targets that will also back the expansion of strategies for energy, emissions reduction, and economic growth ensuring energy security,

sufficiency and availability for future generations and reducing the growth in Zimbabwe's greenhouse gas emissions requires that energy resources are sourced, transformed and consumed sustainably. The Government has taken several critical steps to shift the country towards more efficient energy consumption, mainly in the electricity sub-sector. This policy builds on - achievements already attained and proposes a comprehensive set of initiatives to further unlock energy efficiency potential in the country.

BARRIER	PROPOSED WAYS TO OVERCOME THE BARRIER
High cost of technology/ equipment	· Create competition in the sector
	· Subsidise the products
	· Promote local manufacture
Prohibitive duties and taxes	· Incentivise through removal of duty
	· Removing the taxes
Lack of funding	· Create an environment that promotes investment in the energy efficiency sector
Skills, knowledge and capacity gap	· Skills and knowledge transfer
	· Capacity building
	· Equipping local learning institutions for offering certifying courses in energy efficiency.
Lack of awareness	· Carry out awareness programmes on all media platforms
Outdated equipment	· Retooling and retrofitting old equipment
	· Adopting energy-efficient equipment, machinery and technology
Sub-economic tariff	· Introduce an economical cost-reflective tariff
Absence of incentivise, ratchets and penalties	· Introduction of appropriate inefficiency penalties within the supply and distribution system

3. POLICY VISION, GOAL, AND OBJECTIVES

3.1. VISION

To attain energy efficiency in all sectors of the economy and society by 2030.

3.2. POLICY PRINCIPLES

- **Economic and Environmental Efficiency:** Promote energy efficiency measures that provide significant economic benefits while minimizing environmental impacts and greenhouse gas emissions.
- **Technology and Innovation:** Support the development and adoption of innovative technologies that enhance energy efficiency across all sectors.
- **Consumer Engagement and Equity:** Educate and involve consumers in energy-saving practices, ensuring that programs are accessible and beneficial to all segments of the population, particularly disadvantaged groups.
- **Regulatory and Policy Support:** Establish supportive policies and regulations that facilitate the implementation of energy efficiency measures.
- **Data-Driven Collaboration:** Utilize data to monitor and evaluate energy efficiency initiatives, encouraging partnerships among governments, businesses, and communities to drive collective efforts.

3.3. GOALS AND OBJECTIVES

This policy is built on the principles of development, sustainability, affordability, accessibility, social inclusion, gender equity, and employment creation. The policy supports the development of strategies that consider the energy needs of women, youths, and other vulnerable groups and strengthens their participation in energy efficiency. The policy intends to stimulate energy efficiency in the fulfilment of the following broad policy objectives.

The objectives of this Policy are:

1. To promote energy use reduction across all sectors: Establish an integrated strategy to significantly reduce energy consumption in residential, commercial, industrial, transport, and agricultural sectors, ensuring effective socio-economic development.
2. To foster ESCO development and technological innovation: Encourage the establishment and growth of Energy Service Companies (ESCOs) to drive investment in energy efficiency initiatives, while supporting the development of local energy-efficient technologies and enhancing capacity through standards, codes of practice, and specifications for equipment and systems.
3. To advance environmental and social goals: Contribute to greenhouse gas emission reductions while integrating gender, economic, environmental, and safety considerations into energy efficiency initiatives and promoting international cooperation.
4. To create an enabling environment for financing energy efficiency: Foster access to local, regional, and international funding and financial mechanisms for energy efficiency activities, projects, and programs, while establishing robust research, databases, and statistics to inform decision-making and track

4. ENERGY EFFICIENCY POLICY MEASURES FOR ZIMBABWE

The Government shall encourage the integration of energy efficiency measures across all sectors. The policy aims to address energy intensity across all the country's energy sources to achieve universal energy efficiency. It is designed to ensure energy efficiency contributes to achieving the NDS1 prosperous upper middle income status target, commitment to the UNFCCC and its Paris Agreement, and fulfilling the SDGs.

4.1. REGULATORY AND CONTROL MECHANISMS

4.1.1. National Energy Efficiency Strategy and Action Plan

The Government shall develop a National Energy Efficiency Implementation Strategy and Action Plan to meet the objectives of the policy and assist in achieving low carbon development and climate-resilient EE systems. The Action plan shall be reviewed annually.

4.1.2. Energy Efficiency Laws and Regulations

The Government shall develop an Energy Efficiency Act and appropriate regulations critical to EE governance.

4.1.3. Energy Efficiency Statistics, Targets & Indicators

The Government shall support the development of comprehensive energy efficiency targets, comparative energy databases, methods, indicators, and benchmarks at all levels to support the national development agenda.

4.1.4. Minimum Energy Performance Standards and Regulations

The Government shall establish and develop mechanisms, standards, and regulations targeted at MEPS for selected energy end-users.

4.2. MANDATORY ACTIVITIES

4.2.1. Energy Efficiency Audits

The Government shall introduce, at a minimum, mandatory energy efficiency audits that include an energy survey and analysis for intensive energy users. The energy audits shall be undertaken by approved and licensed certified energy auditors.

4.2.2. Energy Management Systems

The Government shall mandate intensive energy users and encourage other industrial users to be certified to a recognised energy management system standard such as the Energy Management Systems (ZWS ISO50001), amongst others.

4.3. COMPLIANCE MONITORING, ENFORCEMENT & EVALUATION

The Ministry responsible for Energy shall be responsible for EE compliance monitoring, enforcement, and evaluation, working with various players and stakeholders.

POLICY PROVISION / GUIDELINE	ACTION POINTS / IMPLEMENTATION MEASURES
Formulation of Energy Efficiency Strategy and Action Plan	- Develop an EE Strategy and Action Plan. - Achieve low-carbon development and climate-resilient EE systems.
Energy Efficiency Act and Regulations	- Develop relevant sector regulations and standardisation for EE - Establish a Measurement and Verification system for savings from DSM - Revise and adapt cost-reflective tariff methodology for both grid and mini-grids and auditing guidelines in line with EE requirements
Developing Energy Efficiency Statistics, Targets and Indicators	- Development of Statistical Survey - Census Instruments - Energy Efficiency Targets (Fourth Tier Targets) - Baseline Statistical Indicators & Database Development - Publish guidelines and national reporting data formats - Establish an Energy Use Index for different sectors
Developing Minimum Energy Performance Standards	Develop MEPS for the energy efficiency sector
	Develop Appliance Labelling guidelines and standards
Mandatory Energy Management Systems Development	- Implement mandatory EE programmes - Tailored audit and M&V training curricula - Tailored audit and M&V Report Formats - Certified M&V Experts or Professionals - Certified Energy Managers and Certified Energy Auditors - Tailored energy management Systems ZWS ISO50001 - Certified Energy Managers for Facilities and Industrial Sites - Energy Management Policy for selected energy end-users

5. SECTOR-SPECIFIC AND TARGETED POLICY PRONOUNCEMENTS

5.1. GENERATION, TRANSMISSION, DISTRIBUTION AND DEMAND RESPONSE

5.1.1. Electricity Generation, Efficiency

To ensure energy efficiency from an electricity generation perspective, the Government shall create and implement models for energy efficiency. EE specifications and or minimum standards will be required for licensing purposes in tandem with the standards for obtaining the highest energy efficiency from the energy source in question as spelt out in the ZERA Act Section 7.3d; “The Authority may, with respect to any energy source declared in terms of subsection (1), make regulations providing for the standards for obtaining the highest energy efficiency from the energy source in question”. The Government has set an allowable conversion efficiency range and shall continue to revise the range to promote EE in power generation at the source. The dispatch of electricity shall be generator efficiency-based and will apply to utility generators and electricity purchased from the private sector.

5.1.2. Transmission and Distribution Efficiency

The Government shall work on reducing technical losses in the transmission and distribution network as spelt out in the country's NDCs. Through its agencies, the Government shall support the systematic extension of the electricity grid while promoting distributed generation and encouraging power quality improvements.

5.1.3. Distributed Generation, Smart Grids, emerging technologies and artificial intelligence

The Government shall fully embrace renewable energy technologies and encourage distributed electricity generation as a means to increase access to electricity. Additionally, the Government will promote the establishment of smart grids, which will integrate advanced technologies, including artificial intelligence, to enhance system efficiency, optimize production, and improve electricity management. By leveraging AI for predictive analytics and real-time

monitoring, smart grids can facilitate more responsive and resilient energy systems, paving the way for a sustainable energy future.

5.1.4. Demand Side Management (DSM) Initiatives

The Government shall support actions that not only reduce electricity consumption but also the peak demand. To ensure energy efficiency and conservation, the Government, through its agencies, shall ensure that the following DSM initiatives are implemented:

a. Energy Efficiency Programs

- Incentives for Upgrades: Offering rebates or subsidies for energy-efficient appliances and systems.
- Home Audits: Conducting assessments to identify energy-saving opportunities.

b. Demand Response Programs

- Peak Load Reduction: Encouraging users to reduce consumption during peak demand periods through financial incentives.
- Real-Time Pricing: Implementing variable pricing to encourage users to shift their usage to off-peak times.

c. Consumer Education and Awareness

- Workshops and Seminars: Educating consumers about energy-saving practices and technologies.
- Information Campaigns: Providing resources on energy conservation and the benefits of DSM.

d. Smart Metering and Technology

- Smart Meters: Installing advanced metering infrastructure to provide real-time usage data to consumers.
- Home Automation Systems: Promoting technologies that allow users to manage their energy consumption effectively.

e. Renewable Energy Integration

- Incentivizing Solar and Wind: Encouraging homeowners and businesses to adopt renewable energy sources.

- **Battery Storage Solutions:** Promoting the use of energy storage systems to balance supply and demand.

f. Load Shifting Strategies

- **Programmable Thermostats:** Enabling users to schedule heating and cooling during off-peak hours.
- **Flexible Industrial Operations:** Encouraging industries to adjust their operations based on grid demand signals.

g. Community-Based Initiatives

- **Local Energy Cooperatives:** Supporting community-led efforts to manage energy resources collectively.
- **Peer-to-Peer Energy Trading:** Facilitating platforms for consumers to buy and sell excess energy from renewable sources.

The Government shall work on improving the efficiency of the energy supply system and delivery infrastructure with the goal of reducing technical losses as may be determined periodically. Aligned with the regional energy efficiency strategy and action plan, this policy aims to attain transmission and distribution losses of 11 per cent or lower. The policy aims to lower peak demand by at least 5 per cent each year, with the goal of reaching a 15 per cent total reduction in electricity consumption by 2030 in sectors using electricity, as compared to the current baseline demand.

5.1.5. Sector Specific Indicators

The Government shall develop specific energy efficiency indicators by resources at the electricity generation level to ensure optimum energy conversion efficiencies. The Government shall also establish particular energy efficiency indicators for the transmission and distribution levels, ensuring optimum electricity evacuation to end users.

5.2. RESIDENTIAL DOMESTIC SECTOR

5.2.1. Efficient Cooking

The Government shall promote more efficient

cooking solutions and technologies and create an enabling environment for the private sector to participate in manufacturing and distribution. Improved cookstoves can convert more than 20 per cent of the energy in wood fuel into heat as opposed to the 10 per cent for conventional stoves. The Policy shall promote the availing of adequate financial support needed to help spur innovation on affordable and scalable clean-cooking solutions.

5.2.2. Fuel Switching

The use of wood fuel for cooking can cause deforestation and indoor pollution. The Government shall support adopting fuel-switching programmes that will introduce new technologies with economic, environmental and health benefits in households.

5.2.3. Efficient Heating and Cooling

The Government shall continue introducing efficient heating and cooling technologies that reduce energy use for water heating, space heating and cooling end-use applications in the domestic residential sector.

5.2.4. Efficient Lighting

The Government shall continue introducing efficient lighting technologies that reduce energy use for lighting end-use applications in the domestic residential sector.

5.2.5. Building Energy Efficiency Codes

The Government, through relevant arms and agencies, shall develop efficient building codes for all new buildings, renovations, and retrofitting. EE retrofits on existing buildings shall be encouraged.

5.2.6. Sector Specific Indicators

The country shall develop energy efficiency indicators for the residential sector that will target domestic end uses such as lighting, heating, cooking and water heating from time to time.

5.2.7. Residential Domestic Sector Targets

This policy adopts a 100 per cent target for the penetration of cooking and heating devices that are energy efficient to achieve savings in the quantity of fuel used. Currently access to clean cooking is at 30%. The Government shall support the development

of targets that consider the needs of women and youth in energy interventions and strengthen their participation in domestic EE initiatives.

5.3. INDUSTRY SECTOR

5.3.1. Industrial Energy Efficiency Improvement

The Government, working with its partners and stakeholders, shall establish an Industrial Energy Efficiency Programme (IEEP) to continuously improve energy intensity. The IEEP programme shall also leverage resources and synergies under the regional SADC Industrial Energy Efficiency Programme (SIEEP), which is intended to support the implementation of the SADC Industrialization Strategy and the 2016-2030 Roadmap. This will contribute to the competitiveness of the industrial sectors by building their capacity to adapt, invest in, and utilise energy-efficiency.

5.3.2. SME and Informal Sector Energy Efficiency Programme

Zimbabwe's economy turned highly informal at the beginning of the 21st century. The Government shall promote performance measurements in using energy in this sector and subsequent improvements in energy intensities. Therefore, adopting energy-efficient technologies and management methods is essential for SMEs' development and growth in Zimbabwe as a cost-effective way to mitigate climate change and increase economic productivity and competitiveness.

Information dissemination – Information dissemination tools tailored to SME-specific needs shall be developed to ensure their easy participation.

Expertise and capacity building – Unlike larger businesses, SMEs can rarely develop in-house expertise on energy efficiency; they are more likely to rely on external advice and support for implementation. Energy efficiency programmes shall, therefore, aim to build the capacity of key stakeholders such as consultants and financial institutions, as well as that of the SMEs themselves.

Financing – SMEs face particular difficulty accessing the finance required to purchase, install and operate more energy-efficient equipment or

implement more efficient operating systems. Access to the proposed financing mechanism in the Policy is key to reducing the national energy intensity. Thus, financing mechanisms shall be designed to suit the specific needs of the SMEs.

5.3.3. Capacity Building for Industry

Capacity building in the sector shall target the development of a human capital and professional database in areas of ISO 50001 Certified Energy Managers (CEM), Certified Measuring and Verification Professionals (CMVP), Certified Energy Auditors (CEA), and related disciplines. As part of the strategy to build capacity, the policy shall promote EE study tours, capacity assessment studies, capacity planning strategies, and an Energy Efficiency Performance Management Development System (EEPMDS).

5.4. MINING SECTOR

The mining sector is a massive consumer of electricity, accounting for more than 20 per cent of the utility-generated power. The implementation of energy efficiency in mining will not only improve their international competitiveness but can also deliver significant benefits to other energy consumers.

5.4.1. Mining Energy Efficiency Improvement

The Government shall encourage the mining sector to improve on their energy intensities. This will be enhanced by establishing institutional energy efficiency policies and energy management programmes.

5.4.2. Artisanal & Small-Scale Miners Energy Efficiency Improvement.

The Policy encourages the establishment of an energy consumption baseline for small-scale and artisanal miners. This data shall be a reference point in the continuous improvement of their energy intensities

5.5. AGRICULTURE SECTOR

5.5.1. EE in Irrigation, Land Preparation & Farm Technology

The Government shall promote the adoption and improvement of EE on all energy-consuming systems

in the agricultural sector. Major energy-consuming systems include land preparation, water pumping, harvesting, and delivery.

The Government undertakes to promote energy-smart Argo-chain systems that will take full advantage of available renewable energy and waste-to-energy technologies. The Government undertakes to explore, integrate, and apply various energy efficiency technologies in specified value chains as enshrined in the Agriculture Food Systems and Transformation Strategy (AFSTS).

5.6. TRANSPORT SECTOR

5.6.1. Energy-Efficient Modern Vehicles with Lower Emissions

The transport sector is one of the high-emitting sectors, accounting for a 22 per cent share of greenhouse gas emissions and the second largest source of emissions after electricity generation. Emissions from transport services are forecast to rise significantly as demand for vehicles and transport service increase with economic growth. With the vehicle fleet doubling every ten years, energy efficiency in the transportation sector offers the opportunity to reduce GHG emissions and contribute to meeting the NDC commitments. The Government shall continue to promote the uptake of modern and cost-effective modes of transport and develop fuel efficiency standards. Zimbabwe imports most vehicles, so there is a need to specify minimum fuel efficiency levels for all incoming vehicles of various categories.

5.6.2. Promotion of Non-Motorised Transport and Eco-Driving

The policy promotes eco-driving, which leads to fuel savings, cuts pollutant emissions, lowers noise pollution, and reduces the number of accidents. The policy encourages the use of non-motorised transport systems as well as mass transportation systems. This also entails development of the relevant infrastructure and financing mechanisms.

5.6.3. Promotion and adoption of non-mineral fuel motorised technologies

EE is a primary driver in reducing exhaust emissions and cleaning up the transportation sector. Electric and other non-emitting fuels vehicles are more efficient than internal combustion engines (ICEs) and convert over 85 per cent of electrical energy into mechanical energy, or motion, compared to less than 40 per cent in an ICE. The Government shall promote the adoption of these vehicles and any other alternative EE technologies in the transportation sector as an effective tool for decarbonisation and minimising soot and smog.

5.6.4. Strengthening Sustainable Mobility for Goods through Rail

The Government shall strengthen and enhance the adoption of energy-efficient rail infrastructure to ensure sustainable transportation of goods and passengers. The Government shall thus develop and work on upgrading the rail transportation system to target the resultant reduction in greenhouse gas emissions.

5.6.5. Enhance EE in Air Transportation

The Government shall strengthen and enhance the adoption of energy-efficient technologies in civil aviation to ensure safe, economical, and efficient air travel.

5.7. COMMERCIAL SECTOR

5.7.1. Building Codes and Standards

The Government shall adopt building codes and standards that strengthen the application of energy efficiency and energy-saving standards in the design, construction, renovation, and retrofitting of large buildings. This extends to applying EE solutions, technologies, equipment, and materials and organising competitions on green energy-saving buildings. As a quick and short-term measure, the Government shall promote energy efficiency in lighting for commercial buildings. This Policy encourages the use of reusable materials in the construction of buildings.

5.8. ELECTRICITY SAVINGS PRIORITY AREAS

The Government recognises that any targets should be ambitious, realistic, and accompanied by a supportive and credible framework to drive action towards achievement. They should be understandable, clearly communicated, and transposable into specific actions. This policy recognises that the availability and reliability of data on energy use in the country is

limited and sets ambitious targets of end-use electricity savings by sector to achieve an overall reduction of 15 per cent.

5.8.1. Energy Efficiency Sector targets

The target is to reduce energy consumption by an amount equivalent to power plant across the energy sector

SECTOR	Energy Use Per Sector %	ELECTRICITY SAVINGS BY SECTOR %
Residential	84	40
Industrial	4	25
Agriculture, Mining, Energy Supply Sector	11	25
Transport	1	10
Overall Energy Saving	100	100

5.8.2. Key Assumptions

- There shall be increased generation based on the GDP growth trend and final grid mix by 2030.
- The country's energy use per unit GDP is expected to improve by 50 per cent from 15 megajoules per GDP PPP to 5 megajoules per GDP PPP.
- The use of EE technologies will result in GDP growth and a decrease in energy intensity.

5.9. SECTOR SPECIFIC SUMMARY ACTION POINTS AND IMPLEMENTATION STRATEGIES

POLICY PROVISION/ GUIDELINE	ACTION POINTS/IMPLEMENTATION MEASURES
Energy Supply Sector	- Improve electricity generation efficiency - Improve transmission and distribution efficiency - Develop distributed generation and smart grids - Implement demand-side management (DSM) initiatives - Develop specific energy efficiency indicators at generation level
Residential Domestic Sector	- Promote more efficient cooking - Support the adoption of fuel-switching programmes - Introduce efficient heating and cooling technologies - Promote efficient lighting technologies - Develop Building energy efficiency Codes
Industrial Sector	- Establish an Industrial Energy Efficiency Programme (IEEP) - Introduce SME and informal Sector Energy Efficiency Programme - Develop capacity-building for Industry
Mining Sector	- Encourage the mining sector to improve its energy intensities - Artisanal and small-scale miners' energy-efficiency improvement
Agriculture Sector	Encourage energy efficiency in irrigation, land preparation and farm technology
Transport Sector	- Promote energy-efficient modern vehicles with lower emissions - Promotion of non-motorised, e-mobility and eco-driving - Promotion and adoption of e-mobility - Strengthening sustainable mobility for goods through rail - Promote energy efficiency in air transportation
Commercial Sector	Promote building codes and standards

6. PROMOTIONAL AND MARKET TRANSFORMATION MECHANISMS

6.1. PUBLIC INFORMATION CAMPAIGNS AND PROMOTIONS.

The Ministry responsible for energy is accountable for the development and implementation of continuous awareness and energy-efficiency sensitisation programmes involving all forms of energy. In line with the existing, ongoing, and future activities, the Ministry shall expand the public information campaigns into local languages. The Ministry, agencies, development partners, and other stakeholders shall promote efforts to raise public awareness and information dissemination on energy-efficiency measures.

6.2. SECTORAL ENERGY EFFICIENCY PROGRAMMES

Energy efficiency awareness shall be promoted in the energy sectoral classes in Zimbabwe. The Ministry responsible for Energy, energy sector associations, and their respective members will be part of the programmes.

6.3. APPLIANCE LABELLING REQUIREMENTS

The Ministry responsible for Energy, in conjunction with other stakeholders, shall promote the development of energy products and appliances labelling system. The energy products and appliance labelling system shall:

- Be a trading requirement for specified products and appliances manufactured in Zimbabwe.
- Be required that all imported products and appliances carry such an energy efficiency label or the equivalence of the Zimbabwe label from the country of origination or manufacture before entering Zimbabwe.
- Conform to the SADC and international products and appliance labelling guidelines.

6.4. TEST STANDARDS AND MEASUREMENT PROTOCOLS

The Ministry responsible for Energy shall promote the development, capitalization, and capacitation of local

and institutional facilities and laboratories for performance testing of products and appliances for energy efficiency and quality. The facilities shall be developed to meet independent and accredited test facility status to international best practice levels. This Policy shall support the development of energy performance test standards and measurement protocols used in monitoring, reporting, and the verification of EE.

6.5. INCLUSION OF ENERGY EFFICIENCY IN THE SCHOOL CURRICULA

As part of education, awareness, and market transformation, energy efficiency shall be introduced into the school curriculum from primary and secondary school to tertiary education. The Ministry responsible for Energy shall collaborate with all relevant stakeholders.

6.6. ENERGY EFFICIENCY TOP PERFORMER INITIATIVES

6.6.1. Top Performer

Working with all its partners and stakeholders, the Ministry responsible for Energy shall promote EE initiatives that reward and recognise top performers in energy efficiency.

6.6.2. Rewards and Tax Rebates

The Ministries responsible for Energy, Finance, and Economic Development shall, where possible, reward companies that achieve EE targets.

6.7. ENERGY EFFICIENCY CERTIFICATION SYSTEM

Through its Agencies, the Ministry responsible for Energy shall develop an EE certification system. Certification organisations will require accreditation from the national energy regulator in consultation with the standards body. The Ministry responsible for Energy shall occasionally review and establish programmes, products, and services that require mandatory certification. Promotional & Market Transformation Action Points and Implementation Strategies should be pursued.

POLICY PROVISION / GUIDELINE	ACTION POINTS / IMPLEMENTATION MEASURES
Public Information Campaigns and Promotions	- Conduct awareness campaigns at all levels of the society. - Create guidelines for community development activities - Conduct seminars targeting energy managers and auditors
Sectoral Energy Efficiency	Develop specific awareness engagement programmes custom-designed per sector
Engagements	- Engage experts to disseminate information - Develop Sector Energy Use and Productivity Indices - A study on energy efficiency sectorial benchmarks
Appliance Labelling	- Establish well-coordinated appliance labelling standards - Set up a technical committee to develop and update standards
Test Standards and Measurement Protocols	- Develop testing lab inventory for the country and address gaps - Develop standards and test methods for Zimbabwe - Ensure that the standards and requirements as defined by the various protocols are met
Inclusion of Energy Efficiency in school curricula	Introduce sustainable energy issues and EE in school curricula and tertiary education
Energy Efficiency Top Performer Initiative	- Establish annual EE awards for all forms of energy - Review Performance and set new targets and developments
Certification System	- Conduct compliance audits and prepare reports on the scheme - Conduct Measurements and savings verification

7. RESEARCH, INNOVATION, AND TECHNOLOGY DEVELOPMENT

7.1. ENERGY EFFICIENCY RESEARCH

The Ministry responsible for Energy shall promote research, development, innovation, and technology in the EE sector. The research shall be carried out collaboratively with research network members that include but are not limited to:

- Research institutions,
- Universities and innovation hubs,
- Technical and vocational colleges,
- Private sector
- Development partners

7.2. DEVELOPMENT AND DEMONSTRATION OF EE TECHNOLOGIES AND PRACTICES

The Government shall support the local manufacture and importation of various EE technologies, including assessing their market maturity. In line with this commitment, the Government shall promote developing and disseminating innovative energy-

efficient technologies from Zimbabwe's institutions, industries, and organisations.

7.3. INNOVATIVE AND EFFICIENT USE OF ENERGY

The Government undertakes to create an environment that strengthens local and international participation in programmes that assure affordability and accessibility of energy-efficient technologies countrywide, especially for the energy-poor and greater rural population.

7.4. POLICY RESEARCH AND DEVELOPMENT

The Government shall support ongoing research to provide several dimensions of recommendations, options, and situation overviews. An analysis of the economic impacts of efficient energy supply and demand shall be carried out to enhance Energy Efficiency Improvement Programmes.

7.5. RESEARCH, INNOVATION, AND TECHNOLOGY DEVELOPMENT

POLICY PROVISION / GUIDELINE	ACTION POINTS /IMPLEMENTATION MEASURES	RESPONSIBILITY
Energy Efficiency Research Network	- Roll out and establish the Energy Efficiency Research Network - Coordinate and work with the Ministry Responsible for Energy and Development institutions and Universities to design specific products and services to promote EE technologies and attract investment in the sector - Funding management and other financing mechanisms	- Ministry of Energy - EERN - Research institutions, Innovation hubs, universities, technical and vocational colleges, development partners
Development and Demonstration of EE Technologies	- Assess the market maturity for different technologies at periodic intervals - Facilitate some pilot projects during the initial period of the EE project development - Support innovation, research, and development activities	- Research Institutions - Ministry of Energy - Ministry of Finance, Ministry of Higher and Tertiary Education, Ministry of Energy
Innovative and efficient use of Energy Resources	- Finance research and development activities - Innovative financing mechanisms for targeted energy-efficient Technologies or products - Use of biomass residue for efficient energy production - Use of energy-efficient barns in tobacco curing - Minimise post-harvest losses due to rotting	Government/development partners
Policy Research and Development	Finance Research and Development activities	Government, ZERA

7.6. KEY ELEMENTS OF EE

The following elements are crucial and an integral part of EE:

- Behavioural change
- Process improvement
- New technology
- Retrofits

8. COMMERCIAL DEVELOPMENT AND CAPACITY BUILDING

8.1. PROMOTING INVESTMENTS IN ENERGY EFFICIENCY

The Ministry responsible for Energy shall promote and investment. The Government shall facilitate investment in provide the support necessary for energy-efficiency the infrastructure. projects through capital expenditure or infrastructure investment. The Government shall facilitate investment in the infrastructure.

8.2. ENERGY SERVICE ENTERPRISE DEVELOPMENT

Energy efficiency interventions create numerous job opportunities and enterprise development through the establishment of Energy Service Companies (ESCOs). Through its established institutional framework, the Government shall develop the ESCOS regulations. A defining separate guideline outlining the details of the operation, register, code of conduct, and relevant provisions will be created. The Ministry responsible for Energy and the energy regulation authority shall develop and maintain, where possible, quality assurance instruments in energy consulting, such as the list of energy efficiency experts, criteria for qualified consultants, and advisory services.

8.3. ENERGY EFFICIENCY CAPACITY BUILDING

The Government shall prioritise training and capacity building to adopt energy products and services at the sectoral and sub-sectoral levels. Capacity building in various technologies shall be formalised through various academic institutions and professional bodies. In general, training shall be accredited through multiple formal channels. The capacity building shall:

- Assess what capacity is required
- Assess what capacity is available and then
- Address the gap between the two.

8.4. EE TECHNOLOGIES DEVELOPMENT

The Government shall support technological advancements in energy-efficiency for local value addition and production of products, services, and appliances.

8.5. ENERGY EFFICIENCY IN GOVERNMENT

TENDERING AND PROCUREMENT

Energy efficiency interventions create numerous job opportunities and enterprise development through the establishment of Energy Service Companies (ESCOs). Through its established institutional framework, the Government shall develop the ESCOS regulations. A defining separate guideline outlining the details of the operation, register, code of conduct, and relevant provisions will be created. The Ministry responsible for Energy and the energy regulation authority shall develop and maintain, where possible, quality assurance instruments in energy consulting, such as the list of energy efficiency experts, criteria for qualified consultants, and advisory services.

The Government shall develop and promote the adoption of green procurement and "energy efficiency" measures in competitive tendering for goods and services as part of the technical criteria for awarding contracts. This allows the market to search for the most cost-effective, feasible energy savings and conservation potential and compare the measures of various life cycle performance costs. The tendering procedure will motivate the specific government actors to find economical ways to save energy in the tendered funding area and offer cost-effective measures for carrying them out. Effectively comparing and weighing life cycle costs shall be appropriately weighted for maximum financial and environmental impact.

8.6. ENERGY EFFICIENCY AND INDUSTRY 5.0 (OR SUBSEQUENT AMENDMENT)

In line with global development trends, the Government promotes and supports emerging technology transformation to improve energy efficiency by integrating technologies that gather and analyse energy use data. Industry 5.0 shall be coordinated for innovative technological solutions for limiting energy waste and providing real-time control over consumption. This approach will bring enormous benefits to the environment, Government, and companies, including cost reduction and greater competitiveness. The Government shall prioritise, promote and support Industry 5.0 revolution-based technologies for all its EE programmes and projects.

8.7. COMMERCIAL DEVELOPMENT & CAPACITY BUILDING

8.7.1. Action Points and Implementation Strategies

POLICY PROVISION / GUIDELINE	ACTION POINTS / IMPLEMENTATION MEASURES
Promoting Investments in Energy Efficiency	- Allocate funding - Undertake market assessment and investment potential studies - Apply Investment Incentives - Develop capacity to access various sources of funding for project development and implementation
Energy Service Enterprise Development (ESCOs)	- Promote local entrepreneurship in ESCOs - Involve the participation of local communities - Create ESCO Registry - Promote the creation of the ESCO Association - Develop and adopt EE technical and quality of service standards
Energy Efficiency Capacity Building	- Initiate skill development programmes for skills for EE technology - Undertake technical training to build relevant solid skills from partnerships with other Countries for skill development and technology transfer - Collaborate with Universities and technical institutions to design training programmes for the workforce - Design specific plans to encourage higher participation of women and youth in capacity building. - Design local accreditation programmes for certified investment grade auditors and certified energy savings verifiers, drawing on international standards and materials
Energy Efficient	Promote technologies that adhere to the defined standards & specifications
Technologies Development	Encourage domestic solutions aimed at promoting the production of high-quality EE services, products, and appliances.
Energy Efficiency in	Develop Competitive Bidding Guidelines.
Government Procuring and	Prepare standard bidding documents, including the request for proposal (RFP), Virtual Power Purchase Agreement, bid formats including evaluation formats, and other necessary documents
Tendering	Adopt standardised model contracts about government guarantees, licensing, and application of competitive bidding
Energy Efficiency and Industry 5.0	Promote the adoption of Industry 5.0
	Incentives industry 5.0

9. FINANCING ENERGY EFFICIENCY

This Policy creates an enabling environment and assists in the mobilisation of funding through both conventional and non-traditional approaches for specific activities for EE. Preference in directing concessionary funding mobilised by the Government shall be given to Accredited Entities.

9.1. GRANTS / SUBSIDIES

To help address some of the financial barriers to improving EE, the Government shall provide for the promotion of direct assistance, such as grants, available from national and international finance or development partners. The Government may extend subsidies where initiatives are far-reaching in the national development agenda.

9.2. CARBON FINANCING

The Government shall consider financing energy efficiency activities and programmes through carbon tax upon consultation with the Ministry responsible for Finance.

9.3. GREEN LOANS

This Policy shall promote and support work on "Green Loans". This provision shall include establishing dedicated credit lines, such as soft loans, to be offered

by finance institutions. In sync with the existing energy-related policy and strategy documents, this can be established under the auspices of existing funding frameworks such as the 'Green Energy Fund' and the 'Adaptation Fund'.

9.4. GUARANTEE FUNDS & FIRST LOSS FACILITIES

For bankable national projects, this Policy supports EE initiatives and projects by accredited players by issuing a letter of guarantee.

9.5. DEVELOPMENTAL INFRASTRUCTURE FUNDS FOR ENERGY EFFICIENCY

The Policy promotes energy efficiency in all infrastructure development projects & programmes, e.g., through the Prescribed Asset Fund.

9.6. PENALTIES FOR ENERGY INEFFICIENCY

The policy shall empower agencies in the energy sector, such as ZERA, ZETDC and others, to penalise energy-inefficient operations or actions following existing set legislative instruments.

9.7. FINANCING ENERGY EFFICIENCY ACTION POINTS AND IMPLEMENTATION STRATEGIES

POLICY PROVISION / GUIDELINE	ACTION POINTS / IMPLEMENTATION MEASURES
Grants / Subsidies	· Coordinate with multi-lateral institutions and agencies
	· Obtain grants, financial support, and technical expertise for EE projects from Domestic and International funding.
	· Provide a precise mechanism for grants and capital subsidies.
Carbon Financing	· Extend Carbon Tax to fund EE
	· Facilitate the creation of a special-purpose investment fund
Green Loans	· Create a Green Energy Fund for EE projects
	· Administer the Green Energy Fund
	· Create a financing mechanism for banks to promote EE
Guarantee funds and First Loss Facilities	· Apply and attain approval from the legislative body for a sovereign guarantee
	· Develop guidelines for common guaranteed instruments
Prescribed Assets and Infrastructure Funds	· Coordinate with the Ministry Responsible for finance for the management of the Green Energy Fund
	· Recommend projects according to Prescribed Asset Status
On Bill Repayment facilities and Green Bonds	· Develop and notify smart metering regulation
	· Study to inform adoption or abandonment of the scheme
Energy Performance Contracts	· Create SLAs as part of the ESCO Development Framework
Financial and Tax Incentives for Energy Efficiency Investments	· Coordinate and work with the Ministry responsible for Finance to decide on financial incentives and tax credits
	· Compile and disseminate various financing facilities available
Penalties for Energy inefficiency	· Advise on the fees to be charged for inefficiency
	· Develop a roadmap for the collection of penalty funds
Innovative Financing Schemes	· Arrange for project finance for developing the EE projects.
	· To design financing mechanisms for raising funds for the development
	· Collaborate with the development partners
	· Mobilise national banks to create investment packages and counterpart funding for the implementation of EE programmes
Private Financing	· Promote financing from the private sector

10. GENDER AND ENERGY EFFICIENCY

The Government recognises the many dimensions of gender equality, including fundamental human rights, education and health, and women's and men's access to jobs and livelihoods. Gender equality also matters as an instrument for development, as it can enhance economic efficiency and improve other development outcomes in three ways:

- Increased productivity
- Improvements in the welfare of families and children
- Making institutions more inclusive and representative

10.1. GENDER SENSITIVE LEADERSHIP AND PARTICIPATION IN ENERGY EFFICIENCY PROGRAMMES

Gender is a factor in the EE sector since access to energy affects women and men differently due to their different roles and responsibilities in households, markets, and communities. This makes the access, use, and impact of energy services different for women and men. The Government remains committed and sensitive to upholding gender inclusion in all areas of this Energy Efficiency Policy. Women and youth can be powerful agents for change in the transition to a sustainable and energy-efficient Zimbabwe through the following strategies:

- Identification of role models at early stages in EE space
- Equal gender participation in all EE promotional activities
- Include EE training in school curricula from ECD level
- National competition for most EE entity

Their involvement in the design, distribution, management, and consumption of sustainable energy solutions is a critical pathway for reaching the SDGs as well as the objectives of this Policy. The Government fully commits to gender equality and equity. It shall

continue to support women and youth entrepreneurs, community-based organisations, SMEs, and large-scale corporates in the transition to EE. The transition to EE creates benefits and opportunities for both women and men, such as job creation, market opportunities, and better health conditions. All the interventions in this Policy are subject to gender inclusivity, equity, and equality.

10.2. GENDER SENSITIVE GOVERNANCE AND ENERGY EFFICIENCY

Women constitute about 52 per cent of the population in the country, and most of them live in rural areas and bear most of the burden of sourcing energy. The Government recognises women as independent users of energy solutions. It shall enable them to benefit from energy access and energy efficiency investments, considering the challenges of land ownership/rights, access to credit, and social constraints. The Policy builds on plans and initiatives already developed or under development by the Government that support gender-responsive budgeting (GRB) in government planning and programming as follows:

- Encourage equal gender enrolment numbers for technical courses at institutions of higher learning
- Include gender-sensitive governance in Company Policy

GRB ensures that general budgets are planned, approved, executed, monitored, and audited gender-sensitively.

10.3. GENDER MAINSTREAMING AND SEX DISAGGREGATED DATA

The country shall conduct a needs analysis to understand the varying energy needs of men and women. In addition, there is a need to have gender/sex disaggregated data in all the interventions in the energy sector. This will assist in reviewing policies and ensure that both men and women have equal opportunities and benefit from such initiatives. Measures shall be devised and put in place to establish and define energy-related Sex aggregated data.

10.4. CAPACITY BUILDING

The Government shall seek to promote targeted capacity building of women and youth as the primary energy consumers and carriers of the greatest burden of sourcing energy, especially in rural areas, at the household level, e.g. biogas and firewood. This Policy seeks to promote the development of user-friendly, energy-efficient gadgets for women, girls, and youth, especially those in rural areas. The gender focal person in all ministries shall be kept abreast of any developments in the energy sector and energy efficiency matters to provide feedback on the

implementation of the Policy and collaborate and share information with other relevant line Ministries and partners. In addition, the Policy seeks the following initiatives:

- Recognise capacity building in EE by companies as part of CSR programmes
- Ensure equal gender participation for training purposes
- Revise National Policy to include EE issues.

11. IMPLEMENTATION STRATEGY

This policy establishes the goal of achieving all cost-effective energy efficiency by 2030 and presents the implementation goals as a framework for advancing the key policy recommendations endorsed.

11.1. ROADMAP & ACTION PLAN FOR IMPLEMENTATION OF POLICY PROVISIONS.

The Ministry responsible for Energy, shall assume the responsibility for implementing this policy and developing a strategy and action plans. In consultation with stakeholders, the Government shall develop action plans to implement the policy provisions and guidelines. The action plan will include amongst other issues, the requirement for a national energy efficiency audit to be conducted every five (5) years.

11.2. MONITORING & EVALUATION

The implementation of this policy shall be monitored as part of the Government's annual review of the implementation of the energy and power development portfolio. The Government shall develop a Monitoring and Evaluation (M&E) framework to analyse policy provisions and guidelines implementation. The policy implementation will be monitored through an M&E matrix to allow the Government to steer and adjust the policy as it is implemented.

11.3. DATA MANAGEMENT AND SHARING

The appropriate sharing of necessary, proportionate, relevant, accurate, timely and secure information is integral to the effective implementation of EE practice and is provided for in this policy and other relevant legislation.

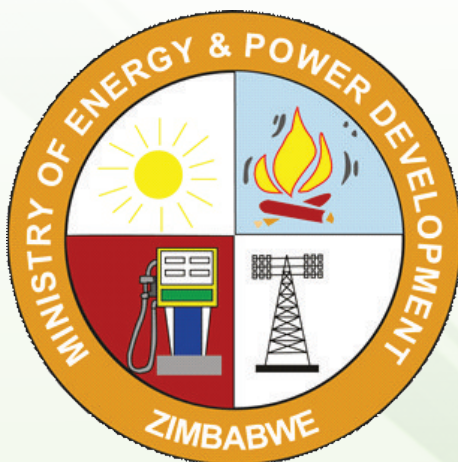
11.4. POLICY DURATION

This policy's implementation period shall run up to the year 2030 and shall be subjected to future reviews.

APPENDIX 1: GLOSSARY/TECHNICAL TERMS

1. **ENERGY EFFICIENCY** – The use of less energy to perform the same task or produce the same result. In simpler terms, it means getting more out of every unit of energy used without sacrificing performance and comfort.
2. **CLEAN COOK-STOVE** – Clean cook stoves technologies address the negative health and environmental impacts associated with traditional cooking technologies, typically through improved combustion efficiency. While several clean cooking technologies meet this definition there is currently no definitive standard for what constitutes a clean cook stove
3. **DEMAND-SIDE MANAGEMENT** – Energy demand management, also known as demand-side management (DSM) or demand-side response (DSR), is the modification of consumer demand for energy through various methods such as financial incentives and behavioural change through education.
4. **ENERGY INTENSITY** – A measure of energy productivity. Primary energy intensity is the total energy consumption versus the national gross domestic product (GDP). Zimbabwe's intensity was 16 mega joules per GDP PPP in 2015 while the SADC average was 7.9 mega joules per GDP PPP. The global average was 5.1 mega joules per GDP PPP (SACREEE 2018) - Energy Intensity is measured by the quantity of energy required per unit output or activity so using less energy to produce a product reduces the intensity.
5. **ENERGY SERVICE COMPANIES (ESCOs)** – These develop, design, build, and arrange to finance projects that save energy, reduce energy costs, and decrease operations and maintenance costs at their customers' facilities. In general, ESCOs act as project developers for a comprehensive range of Energy Conservation Measures (ECMs) and assume the technical and performance risks associated with a project. An ESCO is a company that offers energy services which may include implementing energy-efficiency projects (and also renewable energy projects) and in any case on a turn-key basis.
6. **ENERGY EFFICIENCY INDICATOR TIER** – Degree of disaggregation of energy performance. Energy indicators are an important tool for analysing interactions among economic and human activity, energy consumption, and carbon dioxide (CO₂) emissions. These indicators show policymakers where energy savings can be made. In addition to providing information on trends in past energy consumption, energy efficiency indicators can also be used to help model and forecast future energy demand.
7. **ENERGY PORTFOLIO SECTORS** – According to the National Energy Efficiency Audit report (NEEA 2015) Zimbabwe adopted the following sectors which were carried forward in the development of the Policy document. These are Household and residential
8. **INDUSTRY 4.0** – Fourth Industrial Revolution
9. **INDUSTRY 5.0** – Fifth Industrial Revolution
10. **JOULE/KILOJOULE/MEGAJOULE** – A Joule (J) is a unit of work or energy equal to the energy expended to produce one watt of power for one second. A kilojoule (kJ) is a unit of energy equal to one thousand (10³) Joules; a mega joule (MJ) is one million (10⁶) Joules; and so on.
11. **KILOTONS OF OIL EQUIVALENT (ktoe)** – A unit of energy, defined as the amount of energy released by burning one tonne (1000 Kilograms) of crude oil.
12. **MEGAWATT** – A unit of power equal to one million watts, especially as a measure of the output of a power station
13. **PRIMARY ENERGY** – The theoretically available energy content of a naturally occurring energy source (such as coal, oil, natural gas, uranium ore, geothermal and biomass energy, etc.) before it undergoes conversion to useful final energy delivered to the end user.
14. **POWER FACTOR (PF)** – The ratio of working power, measured in kilowatts (kW), to apparent power, measured in kilovolt amperes (kVA).
15. **THE MINISTRY** – Ministry of Energy and power Development

UPPER MIDDLE-CLASS ECONOMY – A middle-income country with a diverse group by size, population, and income level. The upper-middle-income economies are characterised by a Gross National income (GNI) per capita between \$4,046 and \$12,535



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