

ECOWAS Energy Policy Updated

2023



Economic Community of West
African States



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ABBREVIATIONS AND ACRONYMS

ECOWAS	Economic Community of West African States
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EE	Energy Efficiency
EIS	Energy Information System
ERERA	ECOWAS Regional Electricity Regulatory Authority
FODETE	Fonds pour le Développement et le Financement des secteurs des Transports et de l'Énergie / Transport and Energy Sector Development Fund
GHG	Greenhouse gases
IAEA	International Atomic Energy Agency
ICC	Information and Coordination Centre
LPG	Liquefied Petroleum Gas
Mtoe	Million tonnes of oil equivalent
MWh	Megawatt-hour
M&E	Monitoring and Evaluation
NDC	Nationally Determined Contribution
IPP	Independent Power Producer
PPP	Public-Private Partnership
R&D	Research & Development
SDG	Sustainable Development Objective
SO	Strategic Objective
TSO	Transmission System Operator
WAEMU	West African Economic and Monetary Union
WAGP	West African Gas Pipeline
WAGPA	West African Gas Pipeline Authority
WAPP	West African Power Pool System

I. INTRODUCTION

1.1 Background and rationale

Since 1982, the publication date of the last energy policy of the Economic Community of West African States (ECOWAS), several significant economic, social and political changes have occurred globally, in Africa and particularly in ECOWAS. Technological, economic, social, political and geopolitical transformations have considerably modified the energy issues of the 15 ECOWAS Member States.

To adapt to these changes, Member States are periodically updating their energy objectives, policies, and regulatory and institutional framework. At the regional level, several sub-sectoral policies have been adopted in the energy sector, specialised agencies have been created and operational, and several strategic studies have been carried out. The importance of enhanced regional cooperation and a harmonised approach between Member States has been demonstrated and is recognised by all actors.

Given the above and anticipating continued global and regional changes over the next 30 years, the 1982 regional energy policy (now almost 40 years old) must be updated.

This document is the updated version of the Economic Community of West African States (ECOWAS) Energy Policy.

1.2 Evaluation of the 1982 Policy

A detailed analysis of the rationale, objectives and results of implementing the 1982 policy is contained in a Sector Diagnostic Report.

1.2.1 Foundations of the 1982 Energy Policy

The main conclusions of the analysis of the '**foundations**' - the term used in the 1982 policy document - are as follows:

- Key importance of energy for the economic and social development of Member States and the impact of energy on most sectors.
- ECOWAS is one of the regions in the world with the lowest rates of access to commercial energy, clean energy and advances in energy efficiency. However, it is imperative to note that there are significant disparities between the 15 member states;

- The need for a transition to renewable energy (RE), identified in the 1982 Policy, was essentially (but not exclusively) driven by the oil crises of the 1970s and the acceptance by political leaderships and many experts of an anticipated 'peak oil' in the 2000s;
- The high consumption of wood fuel in the ECOWAS zone, especially in rural areas (with its adverse impacts on human health and deforestation in the ECOWAS region);
- The need to strengthen the skills of human resources in the energy sector.
- The observation that ECOWAS imports most energy equipment and more than 90% of refined petroleum products while being a net exporter of crude oil.

1.2.2 Objectives of the 1982 Energy Policy

The 1982 policy had the following objectives:

- Setting up institutional frameworks.
- Coordination of efforts;
- Creation of an Energy Development Fund;
- Conservation approach/actions;
- Environmental protection;
- Marshall Plan for skilled labour;
- Reversal of rural-urban migration (through the availability of modern energy);
- Study of the traditional approach (relating to large projects);
- Application of nuclear energy;
- Promotion of new and renewable energy sources.

1.2.3 Results of the implementation of the 1982 Policy

In general, the objectives of the 1982 Policy had not been quantified, probably due to the lack of data. However, the main findings of the evaluation of the 1982 Policy are listed below:

- **Institutional and regulatory:** Very significant progress has been made at the regional and national levels since 1982 regarding sectoral institutions. At the regional level, ECREEE, ERERA, and WAGPA. At the national level, all ECOWAS countries have specialised agencies/structures, including regulators, coordinated by a ministry (or equivalent) in charge of energy.

- **Availability and quality of information:** Significant progress has also been made in this area. Energy information systems (EIS) have been created and are operational in several Member States. At the regional level, ECOWAS has built a regional EIS and has prepared energy balances fed by national information, strengthening the information quality analysis. However, the national systems should be maintained with "dashboards" to monitor and evaluate the performance of energy systems (monitoring and evaluation mechanisms).
- **Coordination of efforts:** Coordination of the preparation and implementation of actions has also improved, partly due to the presence of specialised agencies at the regional level, which play a coordinating role between Member States.
- **Renewable energies:** A fundamental transformation of the energy supply system is underway at the international level and in the ECOWAS region, driven by technological advances that improve the competitiveness of these energies and the global climate imperatives of reducing greenhouse gas (GHG) emissions.
- **Energy saving/energy efficiency:** Although a regional policy and several energy efficiency initiatives and programmes have been put in place, the importance given to energy efficiency and its impact is still low in the ECOWAS region.
- **Energy Development Fund / Programme and Investment Financing:** The Energy Development Fund included in the 1982 Policy is being realised by establishing a Transport and Energy Sector Development Fund (TESDF), which is still being finalised. Due to the expected significant growth in current energy consumption and the necessary transformations, the financing needs of the energy sector will increase. The mobilisation of various financing instruments must therefore be one of the crucial objectives of the regional energy policy.
- **Environmental protection:** Very significant progress has been made. Most ECOWAS countries have developed or adhered to international environmental and social policies and best practices. Some countries have created specialised agencies/structures in this field.
- **Human resources/skilled labour:** The 1982 Energy Policy proposed a "Marshall Plan for Labour". This plan has not been implemented. In a rapidly changing sector with ambitious targets, human resource issues are a key cross-cutting theme for the sector.
- **Nuclear energy:** The 1982 Policy provided for the development of nuclear energy. In 2019, some ECOWAS countries, notably, Ghana, Niger and Nigeria have advanced in their quest to introduce nuclear energy into their electricity generation mix to reduce clean baseload power and to achieve the net-zero energy transition agenda

1.3 Regional situation in 2019 and 2050 projection

1.3.1 regional situation in 2019

The ECOWAS region has very significant and diverse primary energy resources, some of which are still under-exploited or not exploited, including solar, wind, biomass energy, hydroelectricity, oil, natural gas, uranium and mineral coal. The region also participates in international energy trade, exporting energy resources (oil, uranium, natural gas) and importing refined oil products. Finally, energy efficiency can be considered as an energy resource; its potential is significant and largely under-exploited.

Several institutions/agencies have been established at the regional level and are contributing to implementing the ECOWAS regional energy sector objectives.

- The ECOWAS Energy & Mining Directorate and the ECOWAS Commission Directorate coordinate and harmonise Member States' energy policies and programmes and design and implement technology projects.
- The West African Power Pool (WAPP): Created in 1999 but established in 2006, in Cotonou, Benin. In charge of the promotion and development of power generation and transmission, as well as the coordination of electricity exchanges between member states.
- The West Africa Gas Pipeline Authority (WAGPA): Established in 2003 with the signing of the Pipeline Treaty and based in Abuja. Provides representation, facilitation and regulation of the West African Gas Pipeline.
- The ECOWAS Regional Electricity Regulatory Authority (ERERA): Established in 2008 and based in Accra, Ghana. In charge of regulating cross-border electricity trade and interconnections between ECOWAS Member States and monitoring the functioning of the regional electricity market.
- The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE): Created in 2009 and based in Praia, Cape Verde. Promotes and develops the regional renewable energy and energy efficiency market.

All 15 ECOWAS Member States have developed institutional frameworks at the national level, varying from country to country. This includes ministries responsible for energy, agencies specialised in various aspects of the energy sector, and regulatory agencies for certain aspects.

ECOWAS has approved policies, strategies, conducted strategic studies for several sub-sectors and issued standards. These include.

- The Energy Protocol;
- Legal frameworks for the establishment of ECOWAS energy institutions;
- Directives and Decisions concerning the regional electricity market;
- The Regional Policy on Renewable Energy and Energy Efficiency;
- Gender, Equality, Equity Policy.
- Strategic studies, notably on Hydrocarbons.
- The Regional Directive on Energy Efficiency in Buildings (EEB);
- The regional standard ECOSTAND 071-1: 2017 (E) covers the requirements for AC-powered refrigeration appliances with a storage volume of up to 1500 litres;
- Regional Standard ECOSTAND 071-2 : 2017 (E) covering the requirements for domestic and commercial AC air conditioners such as: (1) portable air conditioners; (2) unitary; (3) split, and (4) central air conditioners
- Regional Standard ECOSTAND 054: 2016 (E) covering requirements for off-grid lighting products such as: (1) separate fixed (indoor) lighting systems; (2) separate portable lighting systems; (3) portable in-vehicle systems, and (4) integrated fixed (outdoor) systems.

The adoption of harmonised standards, conformity assessment procedures and measures for equipment manufactured, assembled, imported or sold in any of the ECOWAS countries have the effect of:

- Reducing technical barriers to trade;
- Encouraging intra and international trade;
- Strengthen the industrialisation of the region.

The total energy supply increased from about 106 million tonnes of oil equivalent (Mtoe) in 2010 to 172 million tonnes in 2019 (base year)¹. A detailed description of the ECOWAS energy system can be found in the Sectoral Diagnostic Report.

Over 2010-2019, the total energy supply has increased by 5.5% per year. Oil and biomass energy represented 29% and 59% of the total primary energy supply in 2019 against 25% and 60% in 2010. This illustrates the need to improve the supply mix of ECOWAS, which is still dominated by oil products, mainly imported and traditional biomass.

- **Renewable energy:** The share of renewable energy in 2019, including hydro-electricity, was less than 1.5%. Excluding hydropower, the share of other renewables, mainly solar photovoltaic (PV), is less than 0.5%.
- **Refining and petroleum products:** ECOWAS is a net exporter of crude oil. However, only a tiny proportion of this oil is refined due to unavailable capacity. As a result, the share of imported oil products is substantial.
- **Power mix:** The share of natural gas in power plant inputs has almost doubled between 2010 and 2019. This high penetration is primarily due to the preference of natural gas for power generation in gas-producing and gas-supplied countries. Fossil fuels, especially natural gas, and to a lesser extent, imported oil products, remain the main sources of electricity generation in the ECOWAS region in 2019. The share of mineral coal is marginal and limited to one country.
- **Final consumption:** By 2019, total final consumption had reached about 139 Mtoe, of which nearly 75 Mtoe was wood energy, 12 Mtoe charcoal, and 40 Mtoe oil products. About 31 Mtoe of fuelwood was used to produce 12 Mtoe of charcoal, 90% of which was used by urban households. In addition, more than 70 Mtoe of fuelwood were used in rural areas, mainly by families, and only 4 Mtoe in urban areas, reflecting urban/rural disparities. The large share of fuelwood and charcoal consumption combined with considerable losses

¹ At the time of the diagnostic study, 2019 was the reference year when the ECOWAS Energy Information System had the most recent consolidated data.

due to inefficient conversion processes contributes to increasing pressure on woody forest resources, especially in already weakened supply basins. The respective electricity and natural gas shares are 8 Mtoe and 4 Mtoe. The largest share of final consumption is accounted for by households (64%) and transport (25%), especially road transport, which is also the main source of GHG emissions. The distribution of final consumption by sector reveals the low level of development of the economic sectors, in particular industry and agriculture.

- **Access to forms of energy and sustainable development:** The analysis of final consumption shows the preponderance of traditional energy in meeting basic household needs. This situation has multiple negative impacts, including the sustainability of forest resources and health, particularly of women and children.
- **Access to electricity:** In ECOWAS, access to electricity is characterised by very strong disparities between countries and within countries between urban and rural areas, indicating that policies and action plans must be adapted to each situation. In rural areas, access to electricity remains low despite some progress during the decade 2010-2020. In addition, the quality of service (frequent outages, fluctuating voltage levels, etc.) is below international standards. At the regional level, the rate of household access to electricity in 2019 was around 54%. Of the 15 ECOWAS countries, only three have a rural electricity access rate of more than 35%.

1.3.2 Projected regional situation in 2050.

Two scenarios for the evolution of the ECOWAS energy system have been studied for the ECOWAS energy policy.

A reference scenario (REF) based on the current trend but also takes into account ongoing changes without major intervention, such as the significant penetration of electricity and the modest transition to modern forms of energy. This scenario also takes into account the significant infrastructure under construction. According to this scenario, by 2050, total household final consumption will reach nearly 107 Mtoe, of which 45% for urban households and 55% for rural households. Compared to the reference year, the distribution will have changed significantly and will be distributed as follows: 24% for urban households and 76% for rural households. The differentiated demography and the decrease in wood consumption in rural areas are the main determinants of the redistribution of consumption

between urban and rural areas. The other important parameter is the distribution by forms of energy for urban and rural areas. The total final consumption of urban households will be multiplied by 2.7 between the reference year and 2050, with however important differences according to the forms of energy which reflect the access to modern forms of energy. Consumption of paraffin, which is already very low in 2019 (0.8% of final consumption), will be negligible from 2030 onwards with less than 0.5% of total final consumption.

A green transition scenario (TRANSGREEN) integrates the countries' policies and strategies and their international commitments in the framework of actions aimed at limiting GHG emissions. The hypotheses adopted for this scenario are in line with the orientations, principles and foundations of the proposed regional energy policy, namely greater energy security and more balanced energy mixes, compatible with the economic, social and environmental development sought. In this proactive scenario, by 2050, the household energy mix will undergo profound structural changes that will result in greater access to electricity and clean energy for cooking, particularly LPG. The consumption of traditional energy (firewood and charcoal) will fall sharply. This will considerably reduce forest harvesting for energy purposes. However, preservation policies will be essential for certain particularly fragile forest basins. By 2050, total final consumption by households will reach 94 Mtoe, i.e., a decrease compared to the baseline scenario, due to greater access to more energy-efficient forms of energy and, consequently, to lower energy consumption for the same service. Disparities in access between rural and urban areas will be greatly reduced. The energy mix will be profoundly modified with respectively 20% for electricity, 32% for LPG, and 47% for traditional energy in 2050. However, despite a division by four, wood energy consumption will be 17 Mtoe, representing 43% of total final consumption in 2050. The gains (about 36 Mtoe saved in 2050 alone) are substantial compared to the baseline scenario.

Comparing the two scenarios over the period 2019-2050 shows that the primary wood saved will be considerable. The optimal energy mix in this sector development strategy implies that:

- **The electricity mix:** preponderance of renewable energies and natural gas in 2050. In the period 2020-2050, the energy mix will undergo major fundamental changes. Self-generation will undergo a major structural change. The generators that provide self-generation are mainly powered by imported oil products (gasoline and diesel). Over the period 2020-2030, self-generation will decline sharply and become marginal from 2035.

Individual systems, micro and mini-grids powered by renewable energy will replace oil-based generators;

- **Other petroleum products**, especially fuels used in grid-connected power plants, will decrease significantly and their share in the electricity mix will be negligible from 2040 onwards;
- **Natural gas** will continue to have a substantial share in the electricity mix but its relative share will be lower than that of renewables from 2044 onwards due to the high penetration of renewables;
- **The relative share of hydropower** will decrease from 2030 onwards, but its absolute value will increase substantially in the period 2020-2030;
- Both centralised and decentralised **renewables** will experience high penetration. Electricity interconnections and technological advances in large-scale storage will facilitate the integration of renewables into the electricity mix.

These structural changes will significantly contribute to energy security by limiting imports of oil products and to climate change by reducing greenhouse gas emissions significantly compared to the baseline scenario.

II. VISION AND GUIDING PRINCIPLES

2.1 Vision

ECOWAS, through its updated energy policy, has a vision:

"A Community with access to modern, affordable, reliable and sustainable energy services for improved living standards and socio-economic development".

This policy is **ambitious and transformative**:

- **Ambitious** because it aims to provide universal access to modern and clean energy (electricity, natural gas, butane for cooking, biogas, etc.) at a reasonable cost for 810 million people (forecast for 2050) in the 15 countries of West Africa. It also aims to triple final energy consumption (with a small increase in greenhouse gas emissions) and to increase final energy consumption per capita by 30-40%.
- **Transformative** because it aims at an energy mix based on renewable energies available in the ECOWAS region (hydroelectricity, solar, wind and other renewable energies, and in the future green hydrogen), on natural gas, on a significant improvement in energy efficiency, and on a very significant reduction of wood fuels (wood and charcoal) in the energy balance of the Member States

This vision is fully in line with the ECOWAS Revised Treaty, the Sustainable Development Goals, international agreements on Climate Change (in particular the 2015 Paris Agreement signed by Member States), the ECOWAS Vision 2050, the African Union Agenda 2063 as well as the various national, regional and international commitments of ECOWAS and its Member States

It will be achieved through the progressive realisation of complementary actions, coordinated and supported by Member States and ECOWAS institutions in the long term.

2.2 Guiding principles

The guiding principles for the development of the ECOWAS energy policy and implementation actions are as follows

- **General principles of Community action**

- **Subsidiarity**, whereby only those areas are dealt with at regional level where regional action is, by common agreement of the Member States, deemed to be more effective than national action;
 - **Complementarity**, which makes it possible to take into account the comparative advantages of different countries, ecological zones and production basins;
 - **Partnership and consultation**, which aim to ensure the permanent involvement of stakeholders in the sector concerned, in this case the environment, in the implementation, monitoring and evaluation and possible rewriting of the Community's environmental policy;
 - **Progressivity**, which implies a gradual approach that takes into account national situations and particular interests;
 - **Cooperation, solidarity and coherence** between ECOWAS and Member States.
- **Principles specific to the energy issue**
- **Recognition that access to modern energy is essential to raising the standard of living and quality of life of the population**, and that the ECOWAS region must catch up with the backlog in modern energy consumption and sector performance;
 - **Universal access to modern, clean and affordable energy services**, in line with the objectives of the Member States and the United Nations Sustainable Development Goal #7 adopted by the Member States;
 - **The promotion of sustainable development and the preservation of the environment** through the development of energies with mitigable environmental and social impacts, and limited impacts on greenhouse gas emissions (recognising that ECOWAS' contribution to GHG emissions is of the order of 0.5% of global emissions);
 - **The promotion of gender equality** and equity in the sector's activities;
 - **Promoting energy efficiency**;
 - **Addressing the negative impacts of the sector's activities on climate change** in line with the United Nations Sustainable Development Goal #13 on climate change and Member States' commitments;

- **Increasing the governance** and performance of the energy sector as a prerequisite for the successful implementation of regional and national energy policies and strategies;
- **The search for security of supply** through the development of regional energy resources and infrastructure as well as regional energy exchange agreements;
- **The development and continuous updating of skills** in the energy sector by recognised national and regional institutions;
- **The mobilisation of financial resources for the implementation of the programmes**, including the involvement of the private sector, public-private partnership and private sector funding.

III. STRATEGIC OBJECTIVES AND PRIORITY ACTIONS

3.1 Strategic objectives

The proposed energy policy is intended to be transformative in a global and regional economic, social and energy context in rapid transition. The strategic sectoral objectives for 2050 reflect the development objectives of the Member States and those of the regional energy agencies, as well as the conclusions of the sectoral diagnosis, namely

- **An energy sector at the service of improving living standards and quality of life in the ECOWAS region.**
- **A transformation of the energy sector towards modern energy** (progressive substitution of wood fuels) **and clean energy** (progressive substitution of liquid fossil fuels by renewable energy and natural gas and other gaseous fuels), as well as **significant improvement in energy efficiency.**
- **An increase in regional energy exchanges** allowing for cost reduction, improved reliability of energy systems and the development of an optimal energy mix based on renewable energies or energies with little impact on the environment and the climate.
- **Member States' commitments reflected in the Sustainable Development Goals** (SDGs #7 and #13 in particular, the Paris Agreement on Climate Change and the NDCs), ECOWAS Vision 2050 and the African Union's Agenda 2063

The energy policy is structured around **six (6)** Strategic Objectives, which are listed in the following table:

TABLE 1 STRATEGIC OBJECTIVES OF ECOWAS ENERGY POLICY

Strategic Objective #1	Improve the governance and performance of the energy sector
Strategic Objective #2	Ensure universal access to adequate, affordable, reliable and sustainable electricity services
Strategic Objective #3	Improve the security, reliability and quality of energy supply
Strategic Objective #4	Diversify the energy mix through greater integration of renewables, natural gas, nuclear and all other forms of clean energy including hydrogen
Strategic Objective #5	Promote energy efficiency and conservation
Strategic Objective #6	Increase the population's access to modern and clean energy for cooking

Each objective contributes to achieving the Long-Term Vision (see the following chart).

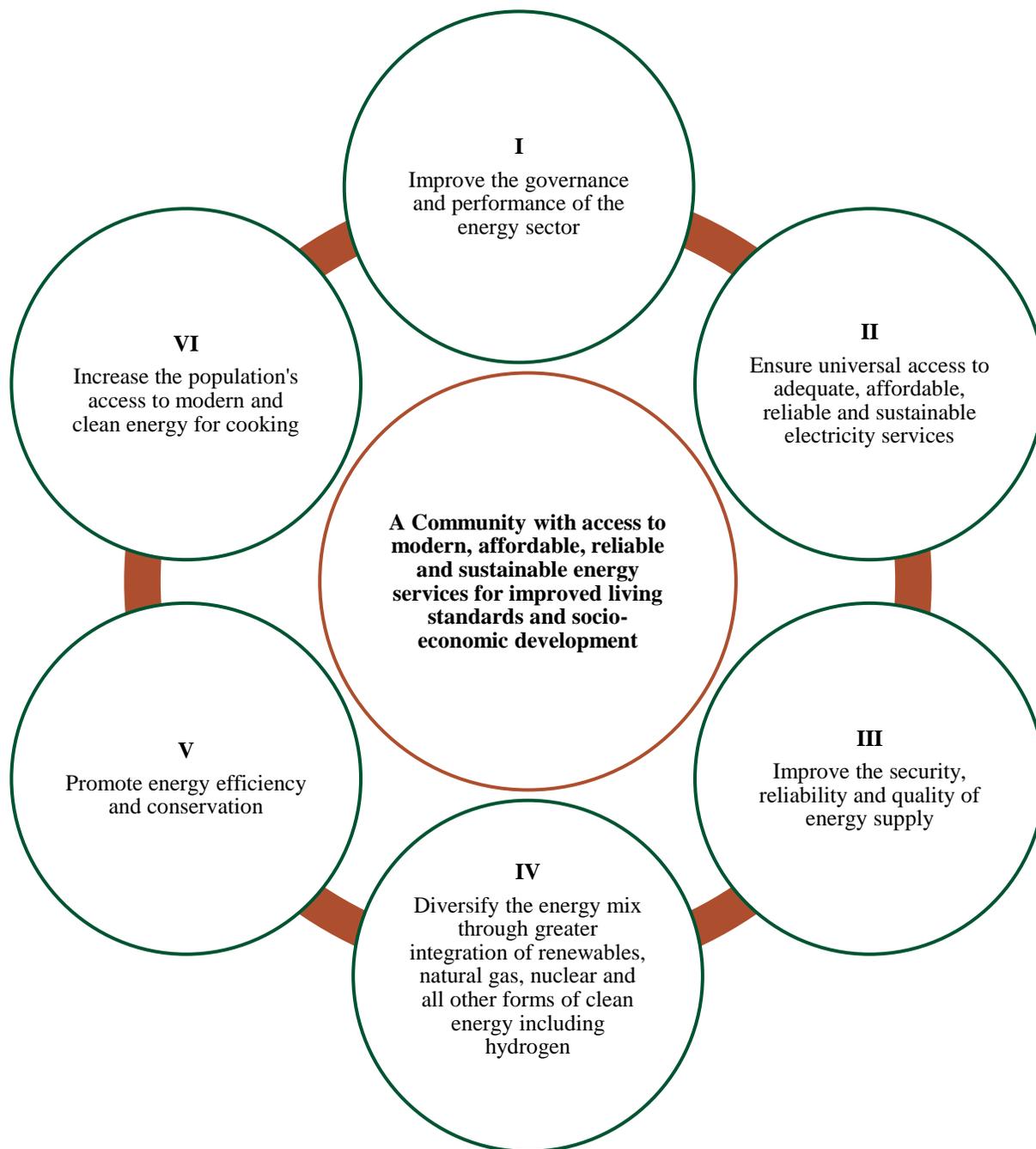


FIGURE 1 STRATEGIC OBJECTIVES AND SECTORAL VISION

The following sections describe each Strategic Objective and the priority actions.

Strategic Objective #1: Improve the governance and performance of the energy sector.

Governance" brings together the policies, measures, legal rules, institutions, information and stakeholder participation mechanisms that ensure the proper functioning and control of the activities to be carried out to achieve an objective. Good governance is based on four fundamental principles: accountability, transparency, the rule of law and participation.

Governance, transparency of energy sector activities, improvement and continuous upgrading of skills are essential for improving the performance of energy sector entities. ECOWAS, through its specialised structures and Member States, should accelerate the implementation of programmes to improve governance and transparency in the energy sector.

Strategic objective #1 will be implemented through the harmonisation of policy and pricing frameworks, improved energy information and capacity building.

Strategic Objective #2: Ensure universal access to adequate, affordable, reliable and sustainable electricity services

Universal access is a major challenge in the region, as almost half of the population still does not have access to electricity services. The situation in ECOWAS in terms of quality of service, costs and prices of electricity is mixed. This requires actions adapted to each national situation. Furthermore, the significant differences between the situations in urbanised and peri-urban areas and those in rural areas call for differentiated actions, which are possible thanks to renewable energies and the private sector's interest.

Strategic objective #2 will be implemented by strengthening the planning and implementation of electrification programmes, particularly in rural areas.

Strategic Objective #3: Improve the security, reliability and quality of energy supply

Improving the security, reliability and quality of energy supply is linked to the development of the regional electricity market, the availability of electricity and gas interconnections, the availability of quality oil products in all Member States.

Strategic objective #3 will be implemented through the continuation and strengthening of the regional electricity market and the further development of oil and gas infrastructure and regulatory harmonisation.

Strategic Objective #4: Diversify the energy mix through greater integration of renewables, natural gas and nuclear all other forms of clean energy including hydrogen

The two main sources of GHG emissions in the ECOWAS region are electricity generation from liquid fossil fuels (liquid hydrocarbon thermal power plants) and the use of liquid hydrocarbons in transport. Within the energy transition framework and the Paris Agreements on Climate Change objectives, Member States have committed themselves through their Nationally Determined Contributions (NDCs) to promote green energy in their energy mix. At the regional level, sectoral policies have also focused on extending renewable energy and diversifying energy sources.

Strategic objective #4 will be implemented by transforming Member States' energy systems, particularly by increasing the role of renewable energy in the energy mix.

Strategic Objective #5: Promote energy efficiency and conservation

Energy efficiency, while offering an essential and inexpensive opportunity, plays only a modest role in the implementation of policies and strategies of ECOWAS member states. ECOWAS has developed an energy efficiency policy, the performance of which is monitored by ECREEE. This policy has been translated into national action plans at the level of the member states, the implementation of which varies from country to country.

Strategic objective #5 will be implemented through the reduction of technical losses in electricity networks, the application of minimum efficiency standards (ECREEE), the carrying out of audits, the improvement of the carbonisation of wood into charcoal and the labelling of end-use equipment (improved stoves) for biomass energy.

Strategic Objective #6: Increase the population's access to modern and clean energy for cooking.

Member States have set very ambitious targets for access to clean energy for cooking and for the substitution of solid biomass energy. This substitution towards modern fuels (LPG, biogas, electricity) and clean energies has significant positive impacts in terms of curbing deforestation (through less pressure on the resource), climate change and also on the health of populations (children and women in particular).

Strategic objective #6 will be implemented by promoting the use of clean fuels and other energy sources.

3.2 Priority actions

For each strategic objective, priority actions have been identified as follows:

3.2.1 Strategic Objective #1: Improve the governance and performance of the energy sector

Seven priority actions have been proposed to achieve strategic objective #1 of the energy policy:

- **Priority Action 1.1:** Improve sector policy frameworks and strategies, as well as legal and regulatory frameworks in the electricity sub-sector;
- **Priority Action 1.2:** Improve and strengthen national and regional regulatory frameworks for the electricity sub-sector ;
- **Priority Action 1.3:** Improve the way electricity tariffs are set and the way consumer petroleum products are sold;
- **Priority Action 1.4:** Improve the environmental and social management of investment projects
- **Priority Action 1.5:** Fully integrate gender, equality and equity into energy sector activities;
- **Priority Action 1.6:** Improve and harmonise information, communication and access to reliable data and indicators;
- **Priority Action 1.7:** Design and implement a framework for strengthening and continuously updating regional and national skills ;
- **Priority Action 1.8:** Promote Research and Development.

3.2.2 Strategic Objective #2: Ensure universal access to adequate, affordable, reliable and sustainable electricity services.

Two priority actions have been proposed to achieve strategic objective #2 of the energy policy, which are

- **Priority Action 2.1:** Strengthen the implementation of rural electrification programmes;
- **Priority Action 2.2:** Increase the mobilisation of funding

3.2.3 Strategic Objective #3: Improve the security, reliability and quality of energy supply

Four priority actions have been proposed to achieve strategic objective #3 of the energy policy, which are

- **Priority Action 3.1:** Accelerate regional electricity interconnections and further develop the regional electricity market ;

- **Priority Action 3.2:** Develop regional gas interconnections and infrastructure for receiving, storing and transporting oil products ;
- **Priority Action 3.3:** Continue the implementation of harmonised specifications for automotive fuels ;
- **Priority Action 3.4:** Integrate battery energy storage systems into electricity networks to ensure their stability.

3.2.4 Strategic Goal #4: Diversify the energy mix through greater integration of renewables, natural gas, nuclear and all other forms of clean energy including hydrogen

Three priority actions have been proposed to achieve strategic objective #4 of the energy policy, which are

- **Priority Action 4.1:** Increase the provision of renewable energy infrastructure for access to energy services ;
- **Priority Action 4.2:** Support the development of natural gas infrastructure for transport and industry;
- **Priority Action 4.3:** Support the introduction of nuclear into the electricity generation mix
- **Priority Action 4.4:** Promote all other forms of clean energy, including hydrogen.

3.2.5 Strategic Objective #5: Promote energy efficiency and conservation

Three priority actions have been proposed to achieve strategic objective #5 of the energy policy, which are

- **Priority Action 5.1:** Continue efforts to reduce technical and non-technical losses in the electricity value chain ;
- **Priority Action 5.2:** Accelerate the implementation of regionally agreed minimum efficiency standards and energy audits;
- **Priority Action 5.3:** Promote efficient biomass energy production and consumption facilities.

3.2.6 Strategic Objective #6: Increase the population's access to modern and clean energy for cooking.

Two priority actions have been proposed to achieve strategic objective #6 of the energy policy, which are

- **Priority Action 6.1:** Strengthen infrastructure and popularise the use of LPG ;
- **Priority Action 6.2:** Promote the development of alternative clean cooking fuels.

IV. IMPLEMENTATION ACTION PLAN

To achieve the ECOWAS vision through its energy policy, a set of coherent and complementary regional and national actions need to be implemented. They concern governance, transparency and improving the performance of energy sector activities, which is necessary to reduce costs and improve the mobilisation of financing, in particular private funding. They also aim to improve environmental and social management as well as gender equality and equity in the energy sector.

In addition, actions to develop energy infrastructure will also be needed to (i) increase the population's access to modern and clean energy at an affordable cost, (ii) increase the contribution of renewable energy in the energy mix and energy efficiency to participate in the international effort against climate change, (iii) improve the security, reliability and quality of energy supply, (iv) increase the contribution of natural gas in the production of electricity, (v) supply petroleum products at the lowest cost, and (vi) improve the security of supply, reliability and quality of energy supply, (iv) increasing the contribution of natural gas to electricity generation, (v) ensuring the supply of petroleum products at least cost, and (vi) preserving the region's forest resources.

Implementing this vision will require the mobilisation of significant public and private funding, and better coordination, information and communication between the regional level and the Member States, and enhanced monitoring and evaluation.

Strategic Objective 1

Improve the governance and performance of the energy sector

Priority Action 1.1

Improve sectoral policy frameworks and strategies, as well as legal and regulatory frameworks in the electricity sub-sector

Activities / Programmes / Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • Finalise and ensure the implementation of the Regional Electricity Code; • Finalise and ensure the implementation of the Network Code as a benchmark for States; • Develop harmonised operations and practices manuals for transmission and distribution system operators; • Establish common guidelines, rules and procedures for states on the procurement and drafting of Public Private Partnership (PPP) contracts; <p>National level</p> <ul style="list-style-type: none"> • Proceed with the progressive harmonisation of the segmentation rules of the electricity sub-sector, in particular legal or accounting unbundling; • Redefine the status of national agencies by giving them more autonomy and power in their field of competence; • Establish tariff mechanisms to favour off-grid electricity systems; • Develop regulations to support the expansion of stand-alone systems, mini-grids and grid-connected renewable energy systems; • Establish a neutral and independent Transmission System Operator and create the regulatory conditions for access to the networks for eligible customers. 	
Implementation period	2023-2027
Expected results	Policy frameworks and sector strategies, as well as legal and regulatory frameworks in the electricity sub-sector are improved
Result indicators	<ul style="list-style-type: none"> • Number of improved national policies, legislation and regulations; • Level of increase in the volume of private funding (EIP, other private investments) in the Member States.
Beneficiary(ies)	Consumers and all actors in the energy sector
Person(s) responsible for implementation	<p>Regional level: ECOWAS Directorate of Energy and Mines; ERERA, WAPP, ECREEE.</p> <p>National level: Ministries responsible for energy, National Regulators.</p>
Monitoring and Evaluation Mechanism; Data Sources	Regional level: ECOWAS, ERERA and WAPP monitoring reports.

	National level: Activity reports of the Ministries responsible for energy, reports of national regulators and TSOs.
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Priority Action 1.2

Improve and strengthen national and regional regulatory frameworks for the electricity sub-sector

Activities / Programmes / Projects	
<p>Regional level</p> <ul style="list-style-type: none"> Strengthen the powers of ERECA and provide it with adequate financial and human resources; Define coordination mechanisms that avoid overlapping responsibilities of regional agencies. <p>National level</p> <ul style="list-style-type: none"> Implement and monitor national implementation of ERECA guidelines; Guarantee the independence and autonomy of regulatory bodies with reference to the electricity regulatory indices used as assessment tools; Strengthen the capacity of regulatory bodies through appropriate and sustained training programmes. 	
Implementation period	2023-2027
Expected results	National and regional regulatory frameworks for the electricity sub-sector are improved and strengthened
Result indicators	<ul style="list-style-type: none"> Level of implementation by ERECA of regulatory texts of regional scope; Conflict reduction rate; The electricity regulatory index.
Beneficiary(ies)	Consumers and all players in the national and regional electricity markets
Person(s) responsible for implementation	<p>Regional level: ECOWAS Director of Energy and Mines</p> <p>National level: Member States and national regulatory bodies</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: ERECA annual reports</p> <p>National level: Annual reports of national regulators; official bulletins publishing state laws and regulations.</p>

Priority Action 1.3

Improve the way electricity tariffs are set and the way consumer petroleum products are sold.

Activities/Programmes/Projects	
	<ul style="list-style-type: none"> • Train national regulatory bodies in the formulation and determination of tariffs; • Develop and adopt the principles and components of electricity tariffs, namely the electricity supply component, the component relating to the costs of transporting electricity through the transmission and distribution networks and the component relating to taxes and contributions; • To assist Member States in researching and implementing harmonised import taxation and in researching and implementing a common methodology for calculating the selling prices of consumer products.
Implementation period	2023 -2027
Expected results	The methods of setting electricity tariffs and selling petroleum products to the general public are improved
Result indicators	<ul style="list-style-type: none"> • Number of convergent regulations adopted by Member States on electricity pricing ; • Number of convergent regulations adopted by Member States on the pricing of petroleum products ; • Number of National Regulators trained in tariff setting; • Volume of smuggling of petroleum products.
Beneficiary(ies)	<ul style="list-style-type: none"> • Consumers; • Electricity companies, regulatory agencies and oil operators.
Person(s) responsible for implementation	Regional level: ECOWAS Directorate of Energy and Mines, ERERA National level: National regulators
Monitoring and Evaluation Mechanism; Data Sources	Regional level: Activity reports from regional regulators and the ECOWAS Directorate of Energy and Mines National level: Activity reports of national regulators

Priority Action 1.4

Improve the environmental and social management of investment projects

Activities/Programmes/Projects	
<ul style="list-style-type: none"> Finalise and implement the harmonised regional provisions on the environmental and social assessment of cross-border infrastructure projects; Carry out training programmes at regional and national levels. 	
Implementation period	2023-2027
Expected results	Environmental and social management of energy projects is improved
Result indicators	<ul style="list-style-type: none"> Number of texts on environmental and social management; Number of people trained at regional and national level; Number of training sessions conducted at regional and national level.
Beneficiary(ies)	Environment and people in the Member States
Person(s) responsible for implementation	<p>Regional level: ECOWAS Directorates in charge of Energy and Environment, WAPP and ECREEE.</p> <p>National level: Ministries and public entities competent in energy and environmental matters.</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Annual reports of the ECOWAS Directorates in charge of Energy and Environment, WAPP and ECREEE</p> <p>National level: Annual reports of the Ministries in charge of Energy and Environment.</p>

Priority Action 1.5

Fully integrate Gender, Equality and Equity in energy sector activities

Activities/Programmes/Projects

Regional level	
<ul style="list-style-type: none"> • Ensure the implementation of the Additional Act A/SH.2/06/17 on the ECOWAS Gender and Energy Policy; • Monitor the implementation of the ECOWAS Gender in Energy Policy follow-up mechanism. 	
National level	
<ul style="list-style-type: none"> • Update the national energy policy by fully integrating the gender, equality and equity dimension as set out in the ECOWAS gender policies and guidelines; • Establish and implement a strategy and action plan for gender mainstreaming, equality and equity in the energy sector; • Promote the importance of gender, equality and equity in the energy sector at national level through regular advocacy and awareness raising campaigns. 	
Implementation period	2023-2027
Expected results	The gender, equality and equity dimension are fully integrated in the energy sectors
Result indicators	Number of Member States showing full gender mainstreaming, equality and equity
Beneficiary(ies)	Member States and ECOWAS
Person(s) responsible for implementation	<p>Regional level: ECOWAS Commission, in particular the Social Affairs and Gender Department, the ECOWAS Centre for Gender Development and ECREEE.</p> <p>National level: Ministries in charge of Energy and Ministries designated for gender, equality and equity.</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: ECOWAS Annual Reports</p> <p>National level: Annual reports of the Ministries of Energy and the Ministries designated for gender, equality and equity aspects.</p>

Priority Action 1.6

Improve and harmonise information, communication and access to reliable data and indicators

Activities/Programmes/Projects

<p>Regional level</p> <ul style="list-style-type: none"> • Strengthen and continue the implementation of the regional Energy Information System (EIS) and national EISs; • Strengthen the regional EIS management team; • Strengthen the synergy between regional and national action; • Strengthen cooperation between institutions/agencies in the region; • Consolidate data at the regional level and produce annual statistics; • To feed and maintain a database accessible to all actors in the region; • Develop a mechanism and indicators of results and performance of the sector's activities; • Establish protocols for the provision and exchange of information with national entities; • Strengthen collaboration and exchanges with other regional institutions/agencies, notably WAEMU. <p>National level</p> <ul style="list-style-type: none"> • Strengthen and continue the implementation of national EISs; • Strengthen the capacities of the actors in charge of the management of national EIS; • Ensuring institutional sustainability through political and financial commitment by states; • Ensure continuous and regular data collection; • Produce periodic annual statistics. 	
Implementation period	2023-2027
Expected results	Improved and harmonised information, communication and access to reliable data and indicators.
Result indicators	<ul style="list-style-type: none"> • Availability of the EIS database and platforms; • Number of people in charge of the regional EIS ; • Annual statistics exchanged; • Number of people trained at regional and national level ; • Number of training sessions conducted at regional and national level.
Beneficiary(ies)	<ul style="list-style-type: none"> • Energy sector decision-makers; • Investors and industry professionals; • Consumers.
Person(s) responsible for implementation	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE, WAPP s</p> <p>National level: Ministries in charge of energy</p>
Monitoring and Evaluation Mechanism; Data Sources	National level: Regional EIS annual reports and Energy Information Systems (EIS).

Priority Action 1.7

Design and implement a framework for the continuous strengthening and updating of regional and national skills

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • Propose and have adopted by the Member States a regional programme for capacity building in the energy sector; • Establish a steering unit for the regional energy sector capacity building programme; • Take the necessary steps to ensure that the first class joins the programme in 2025. <p>National level</p> <ul style="list-style-type: none"> • Translate the regional energy sector capacity building programme into national programmes; • Nominate national representatives to the steering unit 	
Implementation period	<i>2023-2030</i>
Expected results	A framework for continuous strengthening and updating of regional and national skills designed and implemented
Performance indicators	<ul style="list-style-type: none"> • Programme start-up report; • Number of people enrolled/trained; • Number of grants awarded.
Beneficiary(ies)	<ul style="list-style-type: none"> • Consumers; • National and regional companies and institutions working in the energy sector.
Person(s) responsible for implementation	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE, WAPP, ERERA s</p> <p>National level: Ministries in charge of energy</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Monitoring and evaluation by the ECOWAS Energy Policy Implementation Steering Unit</p> <p>National level: Reports by the Ministry of Energy, National EIS, reports by the National Statistical Agency</p>

Priority Action 1.8

Promote Research and Development

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • To propose and have adopted by the Member States a common regional research and development programme in the energy sector; • Financing and implementing the joint regional research and development programme; • Setting up a technical and financial platform; • Create a framework for sharing and disseminating R&D results between member countries. <p>National level</p> <ul style="list-style-type: none"> • Participation of national research institutions and centres in the regional programme; • Taking into account of R&D results. 	
Implementation period	2023-2030
Expected results	Research and Development promoted
Result indicators	<ul style="list-style-type: none"> • Regional Joint R&D Programme Document; • Report on the implementation of the technical and financial platform; • Number of countries contributing to the process; • Number of publications; • Number of seminars/conferences organised.
Beneficiary(ies)	<ul style="list-style-type: none"> • Energy policy and planning decision-makers ; • National and regional energy institutions; • Consumers.
Person(s) responsible for implementation	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE</p> <p>National level: Ministry in charge of Energy</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Monitoring and evaluation by the ECOWAS Energy Policy Implementation Steering Unit</p> <p>National level: Reports Ministry in charge of Energy</p>

Strategic Objective 2

Ensure universal access to adequate, affordable, reliable and sustainable electricity services

Priority Action 2.1

Strengthen the implementation of rural electrification programmes

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • Intensify the implementation of the ECOWAS Rural and Peri-urban Electrification Master Plan; • Establish a regional institutional mechanism for the promotion of rural electrification. <p>National level</p> <ul style="list-style-type: none"> • Establish an institutional mechanism and a national regulatory framework for the promotion of rural electrification; • Develop policy documents, strategies and master plans for rural electrification development • Reduce access costs (connection and subscription costs); • Promoting productive and income-generating activities in rural areas; • Strengthen the capacity of the staff of the structures dedicated to rural electrification; • Increase, mainly in rural areas, off-grid renewable electricity generation capacity adapted to domestic and productive users with decentralised solutions; • Develop and operationalise a large-scale programme for the implementation of mini-green networks; • Assess institutional arrangements for planning, management and regulation of mini-grids, compensation mechanisms for encroachment of the interconnected grid into concessionary areas; • Provide incentives for the development of mini grids by operators (private operators) that guarantee an affordable price for end-users; • State technical norms/standards and quality of service requirements for off-grid electrification. 	
Implementation period	2023-2030
Expected results	Implementation of enhanced rural electrification programmes
Performance indicators	<ul style="list-style-type: none"> • Rate of access to electricity in rural areas; • Electricity consumption per capita in rural areas; • Number of countries with strategies and master plans; • Number of mini grids built; • % increase in installed capacity.
Beneficiary(ies)	People in rural areas

Person(s) responsible for implementation	Regional level: ECOWAS Directorate of Energy and Mines, ECREEE; National level: National structures in charge of rural electrification.
Monitoring and Evaluation Mechanism; Data Sources	Regional level: Annual report of the ECOWAS Directorate of Energy and Mines, ECREEE and rural electrification agencies and utilities; National level: Annual report on the monitoring and evaluation of the implementation of the ECOWAS Energy Policy by national structures in charge of rural electrification and reports

Priority Action 2.2

Increase the mobilisation of funding

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> Operationalising the FODETE; Continue to mobilise the necessary funding for the implementation of the rural and peri-urban electrification master plan; Organise round tables with donors to mobilise financial resources; Support Member States to ensure greater private sector participation in infrastructure financing. <p>National level</p> <ul style="list-style-type: none"> Increase initiatives to attract investment to the countries; Design financing mechanisms for rural electrification and mini-grids; Facilitate greater private sector participation in infrastructure financing. 	
Implementation period	2023-2027
Expected results	More funding mobilised
Result indicators	Volume of funding mobilised
Beneficiary(ies)	People in rural areas
Responsible for implementation	Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: National structures in charge of rural electrification
Monitoring and Evaluation Mechanism; Data Sources	Regional level: Annual report of the ECOWAS Energy and Mines Directorate, ECREEE and the rural electrification agencies and utilities

	National level: Annual report of the national structures in charge of rural electrification and on the monitoring and evaluation of the implementation of the ECOWAS Energy Policy.
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Strategic Objective 3

Improve the security, reliability and quality of energy supply

Priority Action 3.1

Accelerate regional electricity interconnections and further develop the regional electricity market

Activities/Programmes/Projects	
Regional level	
<ul style="list-style-type: none"> • Implement and regularly update the ECOWAS Master Plan for the development of regional power generation and transmission facilities; • Formalise and adopt all procedures and rules for the operationalisation of the regional electricity market; • Completion of the work and commissioning of the Information and Coordination Centre (ICC) for the regional electricity market and the construction of the fallback centre; • Achieving synchronisation of the entire interconnected electricity network and maintaining reliable operation of the network; • Strengthen the mechanisms for mobilising the financial resources needed to carry out preliminary studies for regional interconnection networks; • Establish adequate mechanisms for greater private sector participation in the financing of regional electricity infrastructure. 	
National level	
<ul style="list-style-type: none"> • Make the operating rules of national markets compatible with those of the regional market; • Ensure alignment of national master plans to reflect regional market developments; • Ensure accounting separation and transparent costing; • Harmonise regulation mechanisms and practices and ensure a good articulation between national and regional regulation. 	
Implementation period	<i>2023-2033</i>
Expected results	Regional electricity interconnections and the regional electricity market are operational

Result indicators	<ul style="list-style-type: none"> • The number of interconnected countries; • The number of market rules enacted.
Beneficiary(ies)	Consumers, Member States, Electricity companies
Person(s) responsible for implementation	Regional level: WAPP, ICC, ERERA, National level: National regulators
Monitoring and Evaluation Mechanism; Data Sources	Regional level: WAPP/ICC Annual Report; Regional EIS data National level: National EIS, annual reports of national regulators and electricity companies

Priority Action 3.2

Develop regional gas interconnections and infrastructure for receiving, storing and transporting oil products

Activities/Programmes/Projects
<p>At the regional level</p> <ul style="list-style-type: none"> • Develop an ECOWAS gas infrastructure master plan; • Continue the implementation of gas interconnection projects already initiated, in particular the extension of the West African Gas Pipeline, the Nigeria-Morocco Gas Pipeline; • Strengthen coordination with other bodies in the region, in particular the WAPP in the context of regional gas-to-power integration schemes; • Promote the development of transnational pipelines for the transport of oil products; • Develop harmonised regional guidelines on security stocks and tool stocks; • Strengthen the mechanisms for mobilising the financial resources necessary for the preparation and implementation of regional gas and oil infrastructure projects; • Establish adequate mechanisms for greater private sector participation in the financing of regional oil and gas infrastructure. <p>At national level</p> <ul style="list-style-type: none"> • Increase the reception capacity of port facilities (unloading wharves, offshore unloading buoys, sea-lines) for imports of refined products and, where appropriate, crude oil; • Increase storage capacity for petroleum products to comply with regional regulations; • Develop the transport of petroleum products by pipeline on routes where this option appears, after study, to be technically and economically beneficial, in particular to open up countries without access to the sea; • Strengthen rail supply on routes where the pipeline solution does not appear viable; • Facilitate operators' access to regional and international funding sources for infrastructure development or upgrading of existing facilities.

Implementation period	2023-2035
Expected results	Regional gas interconnections are developed, and oil reception, storage and transport infrastructures are modernised and strengthened
Result indicators	<ul style="list-style-type: none"> • Number of gas interconnections; • Number of reception, storage and transport infrastructures for petroleum products modernised and built
Beneficiary (ies)	<ul style="list-style-type: none"> • Electricity consumers: households, businesses and administrations (quality of service, production costs), • Motorists, professional drivers and all consumers of petroleum products • Member States
Responsible for implementation	<p>Regional level: ECOWAS Directorate of Energy and Mines, WAPP, WAGPA</p> <p>National level: Ministries in charge of Hydrocarbons and Electricity</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Annual report of the Directorate of Energy and Mines, WAPP, WAPGA.</p> <p>National level: Annual report of the Ministries in charge of hydrocarbons, national regulators and structures in charge of hydrocarbons</p>

Priority Action 3.3

Further implementation of harmonised oil product specifications

Activities/Programmes/Projects

Regional level

- Continue to assist Member States in the transposition of Directive C/Dir.1/9/2020 on the harmonisation of motor fuel specifications into national legislation;
- Establish a mechanism for harmonising the specifications of other oil products;
- Support the strengthening or creation of existing petroleum product analysis and quality control laboratories;
- Consider mechanisms to support the mobilisation of the necessary funding to bring refineries in the region up to standard;
- Create a platform for countries to share their experiences.

National level

- Transpose Directive C/Dir.1/9/2020 and other regional texts on petroleum product specifications into national legislation;
- To ensure the application of the Directive by the actors of the petroleum products distribution sector;
- Strengthen the control capacities of national laboratories;
- Identify funding mechanisms for upgrading refineries where appropriate.

Implementation period	2023 - 2027
Expected results	The quality of automotive fuels is improved
Result indicators	Number of countries applying the Directive C/Dir.1/9/2020
Beneficiary(ies)	<ul style="list-style-type: none"> • Residents of urban centres, especially large metropolitan areas (improved air quality), • Motorists and road professionals (improvement of fuel quality, reduction of specific consumption); • Population of the planet due to the reduction of GHG emissions.
Responsible for implementation	Regional level: ECOWAS Directorate of Energy and Mines, National level: Ministries in charge of Hydrocarbons and Energy
Monitoring and Evaluation Mechanism; Data Sources	Regional level: ECOWAS Directorate of Energy and Mines Annual Report; National level: Annual report of the Ministry in charge of Hydrocarbons and Energy

Priority Action 3.4

Integrate battery energy storage systems into power grids to ensure their stability

Activities/Programmes/Projects	
<p>At the regional level</p> <ul style="list-style-type: none"> • Establish an incentive framework for the deployment of battery energy storage systems in the region; • Identify potential battery energy storage areas for the regional interconnected electricity grid; • Accelerate the implementation of regional projects to integrate battery systems into the grid; • Promote a battery marketing and installation ecosystem. <p>At national level</p> <ul style="list-style-type: none"> • Identify the needs of the national grid for energy storage; • Determine the storage solution(s) best suited to the grid structure and consumer demand, both technically and economically, taking into account regional interconnections; • Set up a training programme for specialised operators (operations and maintenance); • Mobilise the necessary funding for the realisation of battery energy storage projects. 	
Implementation period	2023-2027
Expected results	Stability of electricity networks is improved
Performance indicators	The number of MWh of batteries integrated into the electricity grid
Beneficiary(ies)	Electricity operators, Network operators Electricity consumers.
Responsible for implementation	Regional level: ECOWAS Directorate of Energy and Mines, WAPP, ECREEE National level: Ministries in charge of energy and the national electricity company
Monitoring and Evaluation Mechanism; Data Sources	Regional level: ECOWAS Directorate of Energy and Mines, WAPP, and ECREEE annual report National level: Annual report of the Ministries concerned. Activity reports of the electricity operators.

Strategic Objective 4

Diversify the energy mix through greater integration of renewables, natural gas, nuclear and all other forms of clean energy including hydrogen

Priority Action 4.1

Increase the development of renewable energy infrastructure for access to energy services

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • Updating the ECOWAS renewable energy policy; • Strengthen the capacity of states to draft, negotiate and monitor specific renewable energy contracts; • Take steps to mobilise financial resources for renewable energy projects from donors; • Strengthen skills to ensure the availability of qualified personnel to manage intermittent renewables, especially in the context of interconnections; <p>National level</p> <ul style="list-style-type: none"> • Develop/update national renewable energy policies; • Update the national action plans on renewable energy; • Raising awareness of the economic and environmental benefits of distributed renewable energy; • Establish a fiscal and financial framework for renewable energy equipment; • Establish an institutional mechanism and a national regulatory framework for the promotion of renewable energy; • To offer banking products or financing facilities adapted to each context. 	
Implementation period	2023-2027
Expected results	More renewable energy infrastructure for access to distributed energy services achieved
Result indicators	% penetration of RE in the national and regional mix
Beneficiary(ies)	Consumers
Responsible for implementation	<p>Regional level: ECREEE, WAPP</p> <p>National level: National structures dedicated to the promotion of RE</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Annual report of ECREEE, WAPP and rural electrification agencies and utilities</p> <p>National level: Annual report on the monitoring and evaluation of the implementation of the ECOWAS Energy Policy</p>

Priority Action 4.2

Support the development of natural gas infrastructure for transport and industry

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • Develop harmonised regional regulations for the use of gas as a motor fuel; • Implement the actions related to the development of regional gas interconnections in Priority Action 3.2; • Support the mobilisation of private funding for the realisation of investments. <p>National level</p> <ul style="list-style-type: none"> • Carry out a market study for the distribution of natural gas to industries; • Design and build internal networks for the transport and distribution of natural gas to industries; • Establish national regulations for the use of gas as a motor fuel; • Carry out pilot projects for the use of natural gas in transport; • Provide incentives for industries to switch to natural gas; • Raise awareness and build capacity of transport actors on safety standards related to the use of natural gas as fuel. 	
Implementation period	2023-2030
Expected results	The use of natural gas for transport and industry is popularised
Result indicators	<ul style="list-style-type: none"> • Number of regulatory documents produced ; • Number of people trained; • Number of industries connected to natural gas ; • Length of natural gas distribution infrastructure.
Beneficiary(ies)	<ul style="list-style-type: none"> • Industrial companies; • Transport actors; • Consumers.
Responsible for implementation	<p>Regional level: ECOWAS Directorate of Energy and Mining;</p> <p>National level: Ministries in charge of Hydrocarbons; Natural gas distribution and marketing companies; Gas regulators where appropriate.</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Annual report of ECOWAS Directorate of Energy and Mines and WAPP</p> <p>National level: Annual report of Ministries in charge of energy</p>

Priority Action 4.3

Support the introduction of nuclear into the electricity generation mix

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • Establish the specific institutional, legal and regulatory environment for the introduction of nuclear energy; • Establish an Integrated Regional Nuclear Energy Programme; • Develop a framework for cooperation with the International Atomic Energy Agency (IAEA); • Raising awareness among public and private actors of the interest of moving towards nuclear energy; • Create a framework for sharing experience and exchange on nuclear energy between Member States. <p>National level</p> <ul style="list-style-type: none"> • Develop an action plan to integrate nuclear energy and hydrogen at national level; • Strengthen the human capacities needed for the respective nuclear and hydrogen value chains; • Deepen relations with the IAEA for a gradual introduction of nuclear energy into the national energy mix; • Carry out pilot projects for the production of hydrogen and nuclear electricity. 	
Implementation period)	2023-2040
Expected results	<ul style="list-style-type: none"> • Nuclear energy has been successfully introduced in to the national and regional electricity generation mix.
Result indicators	<ul style="list-style-type: none"> • The share of nuclear energy in the energy mix; • Reduction of national GHG emissions.
Beneficiary(ies)	<ul style="list-style-type: none"> • Consumers; • Electricity companies (lower cost energy production).
Responsible for implementation	<p>Regional level: Directorate of Energy and Mines, ECREEE, WAPP</p> <p>National level: Ministries in charge of energy</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Annual report of the Directorate of Energy and Mines, ECREEE, WAPP</p> <p>National level: Annual report of the Ministries in charge of energy.</p>

Priority Action 4.4

Promote all other forms of clean energy including hydrogen

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> Establish the specific institutional, legal and regulatory environment for the introduction of hydrogen; Finalise and implement the ECOWAS Green Hydrogen Policy and its action plan; Support the implementation of the regional hydrogen policy at Member State level; Raising awareness among public and private actors of the interest of moving towards green hydrogen; Create a framework for sharing experience and exchange on hydrogen between Member States. <p>National level</p> <ul style="list-style-type: none"> Develop an action plan to integrate hydrogen at national level; Strengthen the human capacities needed for hydrogen value chains; Carry out pilot projects for the production of hydrogen. 	
Implementation period)	2023-2040
Expected results	<ul style="list-style-type: none"> The share of other forms of clean energy (hydrogen) in the regional and national energy mix has increased.
Result indicators	<ul style="list-style-type: none"> Level of increase in the share of clean energy in the energy mix; Reduction of national GHG emissions.
Beneficiary(ies)	<ul style="list-style-type: none"> Consumers; Electricity companies (lower cost energy production).
Responsible for implementation	<p>Regional level: Directorate of Energy and Mines, ECREEE, WAPP</p> <p>National level: Ministries in charge of energy</p>
Monitoring and Evaluation Mechanism; Data Sources	<p>Regional level: Annual report of the Directorate of Energy and Mines, ECREEE, WAPP</p> <p>National level: Annual report of the Ministries in charge of energy.</p>

Strategic Objective 5

Promote energy efficiency and conservation

Priority Action 5.1

Continue efforts to reduce technical and non-technical losses in electricity transmission and distribution

Activities/Programmes/Projects	
<p>Regional level</p> <ul style="list-style-type: none"> • Continue to implement distribution loss reduction programmes; • Strengthen the capacity of Member States to develop and implement action plans to reduce transmission and distribution losses; • Support Member States in finding funding for loss reduction. <p>National level</p> <ul style="list-style-type: none"> • Establish a system for monitoring and evaluating transmission, distribution and commercial losses; • Develop projects to reduce these losses in collaboration with the regional level; • Move towards prepayment and/or smart electricity meters. 	
Implementation period	2023-2027
Expected results	Technical and non-technical losses in transmission and distribution are reduced
Result indicators	Level of reduction in transmission and distribution loss rates (%)
Beneficiary(ies)	Electricity companies, Electricity consumers
Person(s) responsible for implementation	<p>Regional level: ECREEE, WAPP</p> <p>National level: National regulators</p>

Monitoring and Evaluation Mechanism; Data Sources	Regional level: ECOWAS EIS database National level: Report of the electricity distribution companies
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Priority Action 5.2

Accelerate the implementation of regionally agreed minimum efficiency standards and energy audits

Activities/Programmes/Projects	
Regional level <ul style="list-style-type: none"> • Develop and operationalise a comprehensive programme for the adoption and operationalisation of regional standards by Member States; • Support Member States in obtaining financing for the implementation of energy efficiency projects. 	
National level <ul style="list-style-type: none"> • Develop and implement a large-scale programme to identify energy savings opportunities for large consumers (industrial and tertiary); • Establish technical structures and institutional anchorage for the appropriate management of the National Energy Efficiency Action Plans (NEEAP); • Build capacity to ensure ownership and sustainability of actions undertaken; • Promote Information, Education and Communication (IEC) activities among stakeholders and encourage financial support from beneficiary companies for the implementation of energy efficient technologies. 	
Implementation period	<i>2023-2030</i>
Expected results	Minimum efficiency standards adopted at regional level are implemented and energy audits are carried out in Member States
Result indicators	<ul style="list-style-type: none"> • Number of active small energy service companies (ESCOs); • Number of jobs created for efficacy testing, labelling, quality control, manufacturing and marketing of equipment; • Number of countries that have adopted the ECOWAS minimum efficiency standards (ECOSTAND); • Number of audits performed/year.
Beneficiary(ies)	Households, industries and services.
Responsible for implementation	Regional level: ECREEE

	National level: Ministries in charge of energy; entities responsible for EE/energy management,
Monitoring and Evaluation Mechanism; Data Sources	Regional level: ECREEE monitoring report National level: Annual report of the Ministries concerned; Annual report of the Ministries and entities concerned with EE/Energy Management

Priority Action 5.3

Promote efficient biomass energy production and consumption facilities

Activities/Programmes/Projects	
Regional level	
<ul style="list-style-type: none"> • Establish an environment for the manufacture and widespread adoption of modern processing equipment (improved, semi-industrial or industrial) for the production of biomass energy fuel; • Continue the implementation of the West African Alliance for Cleaner Cookery, • Carry out pilot projects to disseminate efficient equipment and exchange experiences. 	
National level	
<ul style="list-style-type: none"> • Establish a programme for the manufacture of improved wood charcoal processing equipment; • Ensure that geolocation techniques are used in the identification of fuel production locations and production technologies; • Establish a programme for the manufacture and use of improved stoves for biomass energy fuels; • Professionalise the actors from production to distribution and prohibit / reduce informal activities; • Implement a programme dominated by quality control of equipment, credit, information and communication on the whole chain from production to use of biomass fuels. 	
Implementation period	2023-2040
Expected results	The market for efficient biomass energy production and consumption equipment is established and understood by all players
Result indicators	<ul style="list-style-type: none"> • Number of effective grinding wheels/charring processes in operation; • Volumes of fuel produced in a sustainable manner; • Number of actors involved in the improved cookstove market; • Number of improved cookstoves distributed per year.
Beneficiary(ies)	Households, businesses and administrations
Responsible for implementation	Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: Ministries in charge of domestic fuels

Monitoring and Evaluation Mechanism; Data Sources	Regional level: ECREEE Monitoring Report National level: Annual report of the ministries concerned
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Strategic Objective 6

Increase people's access to modern, clean energy for cooking

Priority Action 6.1

Strengthen infrastructure and popularise the use of LPG

Activities/Programmes/Projects	
Regional level <ul style="list-style-type: none"> • Continue the implementation of the ECOWAS LPG Strategy; • To assist governments in defining and implementing an active butanisation policy and to monitor it in the long term; • Assist Member States in obtaining infrastructure and working capital financing for private operators. 	
National level <ul style="list-style-type: none"> • Develop a detailed long-term butanisation plan based on lessons learned from advanced countries in the region; • Develop/improve the legislative and regulatory framework; • Develop LPG reception, storage and transport infrastructures. 	
Implementation period	<i>2023-2027</i>
Expected results	GLP provision infrastructure is strengthened and fuel is popularised
Result indicators	<ul style="list-style-type: none"> • Evolution of LPG volumes sold per year; • Number of LPG users; • Number of cylinders in circulation in relation to the population ; • Degree of permanence of LPG supply on the market.
Beneficiary(ies)	Households, especially women and food crafts

Responsible for implementation	Regional level: ECOWAS Directorate of Energy and Mines; ECREEE National level: Ministries in charge of Hydrocarbons, in cooperation with other relevant ministries (Environment, Transport, Industry and Commerce, Finance).
Monitoring and Evaluation Mechanism; Data Sources	Regional level: Annual report of the entity responsible for hydrocarbons; report of ECREEE. National level: Annual report of the ministries concerned

Priority Action 6.2

Promote the development of alternative clean cooking fuels

Activities/Programmes/Projects	
Regional level	<ul style="list-style-type: none"> Establish a specific regulatory framework for the promotion of clean cooking energy sources as alternatives to wood, charcoal and other than LPG; Support the establishment and operationalisation of a comprehensive programme for the adoption of clean energy sources alternative to wood, charcoal and non-LPG.
National level	<ul style="list-style-type: none"> Draw on the experiences of countries in the region with advanced clean cooking programmes; Establish a programme dominated by decentralised production, rigorous product quality control and a marketing chain involving local people.
Implementation period	2023-2030
Expected results	The use of clean alternative fuels to charcoal and firewood for cooking has increased
Result indicators	<ul style="list-style-type: none"> Volume of alternative fuels to wood energy; Number of units and fuel production capacity; Number of approved artisans in the programme.
Beneficiary(ies)	Households, businesses and administrations
Responsible for implementation	Regional level: Directorate of Energy and Mines, ECREEE National level: Ministries in charge of domestic fuels;
Monitoring and Evaluation Mechanism; Data Sources	Regional level: ECREEE monitoring report National level: Annual report of the ministries concerned

The successful implementation of the priority actions described above includes challenges and risks which are presented in the following chapter, as well as measures to mitigate these risks.

4.1 Inventory of key implementation challenges and risks

Apart from uncontrollable geopolitical and security risks, the main controllable risks that could impact the implementation of ECOWAS energy policy are the following

- **Insufficient funding** for infrastructure and technical assistance to achieve regional energy policy objectives;
- **Insufficient coordination between the regional level and the Member States**, particularly in the development of detailed implementation actions and the monitoring and evaluation of these measures;
- **Lack of recent preparatory studies**, thus weakening the quality of the proposed implementation actions or leading to delays in mobilising funding and in implementation;
- **Lack of reliable and recent data, which** does not allow for a precise analysis of the situation and developments, and of possible corrective measures to be considered;
- **Lack of national expertise in the detailed preparation of programmes and projects, which** does not allow for adequate preparation of the projects to be implemented, making it more difficult to mobilise public and private funding.
- **Perception of commercial and financial risks by the private sector and financing institutions is high**, making it more difficult to mobilise private financing, leading to higher financing costs, and requiring more complex financing arrangements (mobilisation of sovereign guarantees, creation of provisions, etc.).
- **Insufficient communication** on the content and objectives of the regional energy policy and on the specific progress made and challenges encountered.

4.2 Proposed Risk Mitigation Measures

The proposed risk mitigation measures are as follows:

TABLE 2: RISK MITIGATION MEASURES

CONSTRAINTS AND RISKS	PROPOSED MITIGATION MEASURES FOR CONSTRAINTS AND RISKS
<p>Insufficient funding for infrastructure and technical assistance</p>	<ul style="list-style-type: none"> • Conduct periodic exchanges with international and regional funding institutions. • Include the private sector in a continuous dialogue with ECOWAS institutions and Member States. • Have bankable master plans and project studies.
<p>Insufficient coordination between the regional level and the Member States</p>	<ul style="list-style-type: none"> • Organise regular exchanges (quarterly, biannually) between ECOWAS energy agencies and Member States on the results achieved and the challenges encountered. • Strengthen the human resources of the ECOWAS Commission Directorate responsible for Energy • Establish an Advisory Group of experts involved in the West African energy sector.
<p>Inadequate Monitoring and Evaluation Mechanism</p>	<ul style="list-style-type: none"> • Establish an appropriate mechanism for monitoring and evaluation of the ECOWAS Energy Policy and actions taken by Member States. • Ensure independent monitoring and evaluation, available in a timely manner.
<p>Action programmes insufficiently adapted to the problems of the Member States</p>	<ul style="list-style-type: none"> • Develop the action programmes in close cooperation with the Member States, ensuring a high level of participation by the Member States. • In order to take into account, the diversity of situations in the Member States, group together Member States with similar problems and objectives.
<p>Lack of recent preparatory studies</p>	<ul style="list-style-type: none"> • Develop and maintain master plans; carry out pre-feasibility, feasibility studies, etc. • Create and fund a Project Preparation Fund.

<p>Lack of reliable and recent data</p>	<ul style="list-style-type: none"> • To support Member States in the development and sustainability of Management Information Systems, including, where necessary, the conduct of surveys. • Integrate and sustain the ECOWAS EIS in the activities and budget of the Directorate responsible for Energy. • Carry out a programme to update a number of energy data (including biomass consumption, improved stove penetration, energy efficiency, etc.).
<p>Lack of skills in the detailed preparation of implementation actions</p>	<ul style="list-style-type: none"> • Design and implement a recognised, sustainable and flexible capacity building mechanism at regional level (in a context of rapid transformation of the energy sector). • Design and implement specific capacity building programmes tailored to the needs of the regional level and the Member States. • At regional level: strengthen ERERA and ECREEE. • At Member State level, strengthen some regulators, drawing in particular on the accumulated experience of some national regulators.
<p>Perception of high commercial and financial risks by the private sector and financing institutions</p>	<ul style="list-style-type: none"> • Disseminate/present the updated ECOWAS Energy Policy and its implementation plan (including through the ECOWAS website). • Regularly update and disseminate information on the ECOWAS energy sector. • Implement actions to strengthen governance and transparency in the sector. • Strengthen regional and national regulation.
<p>Insufficient communication from ECOWAS</p>	<ul style="list-style-type: none"> • ECOWAS to develop and implement a Communication Plan including energy policy objectives, measures adopted, challenges encountered. • Take advantage of opportunities (international conferences, etc.) to present the ECOWAS energy situation and policy.
<p>Implementation of sectoral sub-policies (e.g., Gender, Equality, Equity)</p>	<ul style="list-style-type: none"> • Benchmarking policies and strategies implemented in Africa and particularly in West Africa. • Adapt and implement best practices.
<p>Insufficient implementation of sectoral sub-policies (e.g., Gender, Equality, Equity)</p>	<ul style="list-style-type: none"> • Benchmarking policies and strategies implemented in Africa and particularly in West Africa. • Adapt and implement best practices.

V. IMPLEMENTATION, MONITORING AND EVALUATION MECHANISMS

5.1 Institutional implementation mechanism

The proposed organisation and mechanisms for the implementation of the ECOWAS Energy Policy and for monitoring and evaluation are illustrated in the following list:

- **The ECOWAS Commission**, represented by the Commissioner responsible for Energy and the Director of the ECOWAS Commission Energy Directorate. This Directorate will be responsible for coordinating the implementation of the selected actions, reporting and communicating to stakeholders, as well as carrying out the actions concerning Hydrocarbons.
- **Steering Committee**: A Steering Committee will be established to coordinate, monitor and evaluate the results of the implementation of the Regional Energy Policy. The Steering Committee:
 - Define the means to be implemented;
 - Review the findings of the evaluation of the implementation of the policy;
 - Take the necessary corrective measures, which could be based on the work and conclusions of the Advisory Group.

The Steering Committee will be chaired by the ECOWAS Energy Commissioner and composed of one representative from each Member State. The ECOWAS Directorate of Energy and Mines will provide the secretariat. The heads of the ECOWAS specialised agencies will attend the Steering Committee as observers.

- **Implementation Coordination Committee**: The implementation of the Policy will be coordinated by the ECOWAS Directorate of Energy and Mines. A Coordinating Committee will be set up which will include all the operational actors for the implementation of the Policy, namely: ERERA, ECREEE, WAPP, WAGPA, Ministries in charge of energy and agencies/institutions of Member States. This Committee will meet at least once a year to evaluate the results of the implementation of the Policy. In the course of the implementation of the Policy, the operational actors may consider synergy of actions with WAEMU.
- **Advisory Group**: An Advisory Group will be set up and will include multi-sectoral experts, energy donors and private sector actors. Members of this group may be consulted individually

or in committee as appropriate. The main role of this group will be to advise ECOWAS on the implementation of the Energy Policy and on possible adjustments to the implementation plan.

The main persons responsible for the implementation of the Energy Policy are presented in the following table:

TABLE 3 ECOWAS ENERGY POLICY IMPLEMENTATION ENTITIES

Strategic Objective	Primary responsibility
STRATEGIC OBJECTIVE 1 IMPROVE THE GOVERNANCE AND PERFORMANCE OF THE ENERGY SECTOR	
<p>Priority Action 1.1: Improve sector policy frameworks and strategies, as well as legal and regulatory frameworks in the electricity sub-sector.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines; ERERA, WAPP, ECREEE.</p> <p>National level: Ministries responsible for energy, National Regulators.</p>
<p>Priority Action 1.2: Improve and strengthen national and regional regulatory frameworks for the electricity sub-sector.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines</p> <p>National level: Member States and national regulatory bodies</p>
<p>Priority Action 1.3: Improve the way electricity tariffs are set and the way consumer petroleum products are sold</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ERERA</p> <p>National level: National regulators</p>
<p>Priority action 1.4: Improve the environmental and social management of investment projects</p>	<p>Regional level: ECOWAS Directorates in charge of Environment and Energy, WAPP and ECREEE.</p> <p>National level: Ministries in charge of the environment</p>
<p>Priority Action 1.5: Fully integrate gender, equality and equity into energy sector activities</p>	<p>Regional level: ECOWAS Commission, in particular the Social Affairs and Gender Department, the ECOWAS Centre for Gender Development , ECREEE</p> <p>National level: Ministries in charge of Energy and Ministries designated for gender, equality and equity</p>

<p>Priority Action 1.6: Improve and harmonise information, communication and access to reliable data and indicators</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: Ministries in charge of energy.</p>
<p>Priority Action 1.7: Design and implement a framework for the continuous strengthening and updating of regional and national skills</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: Ministry in charge of Energy</p>
<p>Priority Action 1.8: Promote Research and Development.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: Ministry in charge of Energy</p>
<p>STRATEGIC OBJECTIVE 2 ENSURE UNIVERSAL ACCESS TO ADEQUATE, AFFORDABLE, RELIABLE AND SUSTAINABLE ELECTRICITY SERVICES</p>	
<p>Priority Action 2.1: Strengthen the implementation of rural electrification programmes.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: National structures in charge of rural electrification</p>
<p>Priority Action 2.2: Increase the mobilisation of funding</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: National structures in charge of rural electrification</p>
<p>STRATEGIC OBJECTIVE 3 IMPROVE THE SECURITY, RELIABILITY AND QUALITY OF ENERGY SUPPLY</p>	
<p>Priority Action 3.1: Accelerate regional electricity interconnections and further develop the regional electricity market</p>	<p>Regional level: WAPP, ICC, ERERA National level: National regulators</p>

<p>Priority Action 3.2: Develop regional gas interconnections and infrastructure for the reception, storage and transport of oil products.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines of Energy and Mines, WAPP, WAPGA</p> <p>National level: Ministries in charge of hydrocarbons and electricity</p>
<p>Priority Action 3.3: Further implementation of harmonised motor fuel specifications.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines</p> <p>National level: Ministries in charge of hydrocarbons</p>
<p>Priority Action 3.4: Integrate batteries into electricity grids to ensure grid stability.</p>	<p>Regional level: Directorate of Energy and Mines, WAPP, ECREEE</p> <p>National level: Ministries in charge of energy, national electricity company</p>
<p>STRATEGIC OBJECTIVE 4 DIVERSIFY THE ENERGY MIX THROUGH GREATER INTEGRATION OF RENEWABLES, NATURAL GAS, NUCLEAR AND ALL OTHER FORMS OF CLEAN ENERGY INCLUDING HYDROGEN</p>	
<p>Priority Action 4.1: Increase the provision of renewable energy infrastructure for access to energy services.</p>	<p>Regional level: ECREEE</p> <p>National level: National structures dedicated to the promotion of RE</p>
<p>Priority Action 4.2: Support the development of natural gas infrastructure for transport and industry.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines;</p> <p>National level: Ministries in charge of Hydrocarbons; Natural gas distribution and marketing companies; Gas regulators where appropriate.</p>
<p>Priority Action 4.3: Support the introduction of nuclear into the electricity generation mix</p>	<p>Regional level: Directorate of Energy and Mines, ECREEE, WAPP</p> <p>National level: Ministries in charge of energy</p>

<p>Priority Action 4.4: Promote all other forms of clean energy including hydrogen.</p>	<p>Regional level: Directorate of Energy and Mines, ECREEE, WAPP</p> <p>National level: Ministries in charge of energy</p>
<p>STRATEGIC OBJECTIVE 5 PROMOTE ENERGY EFFICIENCY AND CONSERVATION</p>	
<p>Priority Action 5.1: Continue efforts to reduce technical and non-technical losses in electricity transmission and distribution</p>	<p>Regional level: ECREEE, WAPP</p> <p>National level: National regulators and other relevant national structures,</p>
<p>Priority Action 5.2: Accelerate the implementation of regionally agreed minimum efficiency standards and energy audits.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines ECREEE</p> <p>National level: Ministries in charge of Energy Efficiency; Ministries in charge of Energy; entities in charge of EE/energy management,</p>
<p>Priority Action 5.3: Promote efficient biomass energy production and consumption facilities.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE</p> <p>National level: Ministries in charge of domestic fuels</p>
<p>STRATEGIC OBJECTIVE 6 INCREASE THE POPULATION'S ACCESS TO MODERN AND CLEAN ENERGY FOR COOKING</p>	
<p>Priority Action 6.1: Strengthen the infrastructure and popularise the use of LPG.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines; ECREEE</p> <p>National level: Ministries in charge of Hydrocarbons, in cooperation with other relevant ministries (Environment, Transport, Industry and Trade, Finance).</p>
<p>Priority Action 6.2: Promote the development of alternative clean cooking fuels.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE</p> <p>National level: Ministries in charge of domestic fuels;</p>

5.2 Monitoring and Evaluation Mechanisms

Proactive monitoring and adaptation of the policy in line with external and internal developments in the region is absolutely essential for the regional energy policy to remain relevant. A rigorous monitoring and evaluation mechanism² based on relevant indicators as described in the Policy Implementation Plan will form the basis for the expectation of the Policy's objectives. Within this framework, an annual report will be produced by the Policy Implementation Coordination Committee. The elements of this report will be provided by the implementing entities. A standard reporting template will be used for each programme, covering progress towards objectives, challenges encountered and, if available, elements of response to problems encountered. This annual report will be forwarded to the Steering Committee for review and decision.

5.3 Implementation timeline

An initial period of 6 months during which a detailed implementation plan, validated by all stakeholders, will be developed and financial and technical assistance resources are mobilised.

A second period of four and a half years during which priority actions are implemented, six-monthly evaluations (using the monitoring and evaluation mechanism) are carried out, discussed with the Advisory Group, the implementing entities and the Member States. These evaluations should, among other things, provide the basis for defining possible corrective actions.

² A rigorous monitoring and evaluation (M&E) mechanism requires: the designation of competent M&E officers, a 'logical' framework describing/explaining the relationships between objectives, expected results, actions and indicators and sources of information, and assumptions, the action plan, the monitoring aspect (regular collection of information required during the implementation of the policy), the evaluation aspect (analysis of the achievement of plans and objectives), methods of communicating and disseminating the findings of the monitoring and evaluation activity.

VI. LOGICAL FRAMEWORK

TABLE 4 LOGICAL FRAMEWORK

Strategic Objectives	Results chain	Objectively verifiable indicators	Sources and verification tools	Responsible Entities
I IMPROVE THE GOVERNANCE AND PERFORMANCE OF THE ENERGY SECTOR	RESULT 1 Policy frameworks and sector strategies, as well as legal and regulatory frameworks in the electricity sub-sector are improved.	<ul style="list-style-type: none"> Number of improved national policies, legislation and regulations; Level of increase in the volume of private financing (EIP, other private investments) in the Member States ; 	<p>Regional level: ECOWAS, ERERA and WAPP monitoring reports.</p> <p>National level: Activity reports of the Ministries responsible for energy, reports of national regulators and TSOs.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines; ERERA, WAPP, ECREEE.</p> <p>National level: Ministries responsible for energy, National Regulators.</p>
	RESULT 2 National and regional regulatory frameworks for the electricity sub-sector are improved and strengthened.	<ul style="list-style-type: none"> Level of implementation by ERERA of regulatory texts of regional scope ; Conflict reduction rate; 	<p>Regional level: ERERA annual reports</p> <p>National level: Annual reports of national regulators; official bulletins publishing state laws and regulations.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines</p> <p>National level: Member States and national regulatory bodies</p>

<p>I</p> <p>IMPROVE THE GOVERNANCE AND PERFORMANCE OF THE ENERGY SECTOR</p>		<ul style="list-style-type: none"> • The Electricity Regulatory Index; 		
	<p>RESULT 3</p> <p>The methods of setting electricity tariffs and selling petroleum products to the general public are improved</p>	<ul style="list-style-type: none"> • Number of convergent regulations adopted by Member States on electricity pricing ; • Number of convergent regulations adopted by Member States on the pricing of petroleum products ; • Number of National Regulators trained in tariff setting; • Volume of smuggling of petroleum products ; 	<p>Regional level: Activity reports from regional regulators and the ECOWAS Directorate of Energy and Mines</p> <p>National level: Activity reports from national regulators.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ERERA</p> <p>National level: National regulators</p>

<p style="text-align: center;">I</p> <p style="text-align: center;">IMPROVE THE GOVERNANCE AND PERFORMANCE OF THE ENERGY SECTOR</p>	<p>RESULT 4</p> <p>Environmental and social management of energy projects is improved.</p>	<ul style="list-style-type: none"> • Number of texts on environmental and social management; • Number of people trained at regional and national level; • Number of training sessions held at regional and national level ; 	<p>Regional level: Annual reports of the ECOWAS Directorates in charge of Energy and Environment.</p> <p>National level: Annual reports of the Ministries in charge of Energy and Environment.</p>	<p>Regional level: ECOWAS Directorates in charge of Energy and Environment, WAPP and ECREEE</p> <p>National level: Ministries and public entities responsible for energy and the environment</p>
	<p>RESULT 5</p> <p>The gender, equality and equity dimension is fully integrated in the energy sectors</p>	<ul style="list-style-type: none"> • Number of Member States showing full gender mainstreaming, equality and equity ; 	<p>Regional level: ECOWAS Annual Reports</p> <p>National level: Annual reports of the Ministries of Energy and the Ministries designated for gender, equality and equity aspects.</p>	<p>Regional level: ECOWAS Commission, in particular the Social and Gender Affairs Department and ECREEE</p> <p>National level: Ministries in charge of Energy and Ministries designated for gender, equality and equity.</p>

<p>I</p> <p>IMPROVE THE GOVERNANCE AND PERFORMANCE OF THE ENERGY SECTOR</p>	<p>RESULT 6 Information, communication and access to reliable data and indicators improved and harmonised.</p>	<ul style="list-style-type: none"> • Availability of the EIS database and platforms; • Number of people in charge of the regional EIS ; • Annual statistics exchanged; • Number of people trained at regional and national level; • Number of training sessions held at regional and national level; 	<p>Regional level: Annual reports of the regional EIS;</p> <p>National level: Reports by the Ministry of Energy, national EIS, reports by the national statistical agency</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines and ECREEE</p> <p>National level: Ministries in charge of energy</p>
	<p>RESULT 7 A framework for continuous strengthening and updating of regional and national skills designed and implemented</p>	<ul style="list-style-type: none"> • Programme start-up report; • Number of people enrolled/trained; • Number of grants awarded ; 	<p>Regional level: Monitoring and evaluation by the ECOWAS Energy Policy Implementation Steering Unit\$</p> <p>National level: Annual report of the Ministry in charge of Energy</p>	<p>Regional level: ECOWAS Directorate of Energy and Miness and ECREEE</p> <p>National level: Ministry in charge of Energy</p>

<p>I</p> <p>IMPROVE THE GOVERNANCE AND PERFORMANCE OF THE ENERGY SECTOR</p>	<p>RESULT 8 Research and Development is promoted</p>	<ul style="list-style-type: none"> • Regional Joint R&D Programme Document; • Report on the implementation of the technical and financial platform; • Number of countries contributing to the process; • Number of publications; • Number of seminars/conferences organised; 	<p>Regional level: Monitoring and evaluation by the ECOWAS Energy Policy Implementation Steering Unit</p> <p>National level: Annual report of the Ministry in charge of Energy</p>	<p>Regional level: ECOWAS Directorate of Energy and Mining and ECREEE</p> <p>National level: Ministry in charge of Energy</p>
<p>II</p> <p>ENSURE UNIVERSAL ACCESS TO ADEQUATE, AFFORDABLE, RELIABLE AND SUSTAINABLE ELECTRICITY SERVICES</p>	<p>RESULT 1 Enhanced rural electrification programmes are implemented</p>	<ul style="list-style-type: none"> • Rate of access to electricity in rural areas; • Electricity consumption per capita in rural areas; • Number of countries with strategies and master plans; • Number of mini grids built; • Rate of increase in installed capacity ; 	<p>Regional level: Annual report of the ECOWAS Directorate of Energy and Mines, ECREEE and rural electrification agencies and utilities;</p> <p>National level Annual monitoring and evaluation report on the implementation of the ECOWAS Energy Policy.</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE and ECREEE</p> <p>National level: National structures in charge of rural electrification.</p>
	<p>RESULT 2 More funding mobilised</p>	<ul style="list-style-type: none"> • Volume of funding mobilised; 	<p>Regional level: Annual report of the ECOWAS Energy and Mines Directorate, ECREEE</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, ECREEE</p>

<p style="text-align: center;">II</p> <p style="text-align: center;">ENSURE UNIVERSAL ACCESS TO ADEQUATE, AFFORDABLE, RELIABLE AND SUSTAINABLE ELECTRICITY SERVICES</p>			<p>and the rural electrification agencies and utilities</p> <p>National level: Annual report on the monitoring and evaluation of the implementation of the ECOWAS Energy Policy.</p>	<p>National level: National structures in charge of rural electrification</p>
<p style="text-align: center;">III</p> <p style="text-align: center;">IMPROVE THE SECURITY, RELIABILITY AND QUALITY OF ENERGY SUPPLY</p>	<p>RESULT 1</p> <p>Regional electricity interconnections and the regional electricity market are operational</p>	<ul style="list-style-type: none"> • Number of interconnected countries; • Number of market rules issued; 	<p>Regional level: WAPP/ICC Annual Report; Regional EIS data</p> <p>National level: National EIS, annual reports of national regulators and electricity companies</p>	<p>Regional level: WAPP, ICC, ERERA,</p> <p>National level: National regulators</p>
	<p>RESULT 2</p> <p>Regional gas interconnections are developed and oil reception, storage and transport infrastructures are</p>	<ul style="list-style-type: none"> • Number of gas interconnections; • Number of reception, storage and transport infrastructures for petroleum products modernised and built ; 	<p>Regional level: Annual report of the Directorate of Energy and Mines, WAPP, WAPGA.</p> <p>National level: Annual report of the Ministries in charge of hydrocarbons, national</p>	<p>Regional level: ECOWAS Directorate of Energy and Mines, WAPP, WAPGA</p> <p>National level: Ministries in charge of Hydrocarbons and Electricity</p>

III IMPROVE THE SECURITY, RELIABILITY AND QUALITY OF ENERGY SUPPLY	modernised and strengthened		regulators and structures in charge of hydrocarbons	
	RESULT 3 The quality of petroleum products is improved	<ul style="list-style-type: none"> Number of countries applying the Directive C/Dir.1/9/2020; 	Regional level: ECOWAS Directorate of Energy and Mines Annual Report; National level: Annual report of the Ministry in charge of Hydrocarbons and Energy	Regional level: ECOWAS Directorate of Energy and Mines, National level: Ministries in charge of Hydrocarbons and Energy
	RESULT 4 Stability of electricity networks is improved	<ul style="list-style-type: none"> Number of MWh of batteries integrated into the electricity grid; 	Regional level: ECOWAS Directorate of Energy and Mines, WAPP and ERERA annual report National level: Annual report of the Ministries concerned. Activity reports of the electricity operators.	Regional level: ECOWAS Directorate of Energy and Mines, WAPP, ECREEE National level: Ministries in charge of energy and the national electricity company
IV DIVERSIFY THE ENERGY MIX THROUGH GREATER INTEGRATION OF RENEWABLE ENERGIES,	RESULT 1 More renewable energy infrastructure for access to distributed energy services is built.	<ul style="list-style-type: none"> Penetration rate of RE in the national and regional mix; 	Regional level: Annual report of ECREEE and rural electrification agencies and utilities National level: Annual report on the monitoring and evaluation of the implementation of the ECOWAS Energy Policy	Regional level: ECREEE National level: National structures dedicated to the promotion of RE

NATURAL GAS, NUCLEAR AND ANY OTHER FORM OF CLEAN ENERGY INCLUDING HYDROGEN	RESULT 2 The use of natural gas for transport and industry is popularised	<ul style="list-style-type: none"> • Number of regulatory documents produced; • Number of people trained; • Number of industries connected to natural gas; • Length of natural gas distribution infrastructure; 	Regional level: Directorate of Energy and Mines, ECREEE, WAPP National level: Annual reports from the Ministries in charge of Energy	Regional level: ECOWAS Directorate of Energy and Mining; National level: Ministries in charge of Hydrocarbons; Natural gas distribution and marketing companies; Gas regulators where appropriate.
	RESULT 3 Nuclear energy has been successfully introduced in to the national and regional electricity generation mix	<ul style="list-style-type: none"> • Level of increase in the share of nuclear and other clean energy in the energy mix; • Reduction of national greenhouse gas emissions; 	Regional level: Annual report of the Directorate of Energy and Mines, ECREEE, WAPP National level: Annual report of the Ministries in charge of energy	Regional level: Directorate of Energy and Mines, ECREEE, WAPP National level: Ministries in charge of energy
	RESULT 4 The share of other forms of clean energy (hydrogen) in the regional and national energy mix has increased	<ul style="list-style-type: none"> • Level of increase in the share of clean energy in the energy mix • Reduction of national GHG emissions 	Regional level: Annual report of the Directorate of Energy and Mines, ECREEE, WAPP National level: Annual report of the Ministries in charge of energy	Regional level: Directorate of Energy and Mines, ECREEE, WAPP National level: Ministries in charge of energy
V PROMOTE ENERGY	RESULT 1 Technical and non-technical losses in transmission and distribution are reduced	<ul style="list-style-type: none"> • Level of reduction in transmission and distribution loss rates (%); 	Regional level: ECOWAS EIS database	Regional level: ECREEE, WAPP National level: National

EFFICIENCY AND ENERGY CONSERVATION			National level: Report of the electricity distribution companies	regulators
	RESULT 2 Minimum efficiency standards adopted at regional level are implemented and energy audits are carried out in Member States	<ul style="list-style-type: none"> • Number of small energy service companies (ESCOs) active; • Number of jobs created for efficacy testing, labelling, quality control, manufacturing and marketing of equipment; • Number of countries that have adopted the ECOWAS minimum efficiency standards (ECOSTAND) ; • Number of audits performed/year; 	Regional level: ECREEE Monitoring Report National level: Annual report of the ministries concerned	Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: Ministries in charge of domestic fuels
	RESULT 3 The market for efficient biomass energy production and consumption equipment is established and understood by all players	<ul style="list-style-type: none"> • Number of effective grinding wheels/charring processes in operation ; • Volumes of fuel produced in a sustainable manner; • Number of actors involved in the improved cookstove market ; 	Regional level: ECREEE Monitoring Report National level: Annual report of the ministries concerned	Regional level: ECOWAS Directorate of Energy and Mines, ECREEE National level: Ministries in charge of domestic fuels

		<ul style="list-style-type: none"> • Number of improved cookstoves distributed per year; 		
<p style="text-align: center;">VI</p> <p style="text-align: center;">INCREASE PEOPLE'S ACCESS TO MODERN, CLEAN ENERGY FOR COOKING</p>	<p>RESULT 1 GLP provision infrastructure is strengthened, and fuel is popularised</p>	<ul style="list-style-type: none"> • Evolution of LPG volumes sold per year ; • Number of LPG users; • Number of cylinders in circulation in relation to the population; • Degree of permanence of LPG supply on the market; 	<p>Regional level: Annual report of the entity responsible for hydrocarbons; report of the ECREEE.</p> <p>National level: Annual report of the ministries concerned.</p>	<p>Regional level: Entity responsible for Hydrocarbons; ECREEE</p> <p>National level: Ministries in charge of Hydrocarbons, in cooperation with other relevant ministries (Environment, Transport, Industry and Trade, Finance).</p>
	<p>RESULT 2 The use of clean alternative fuels to charcoal and firewood and excluding LPG for cooking has increased</p>	<ul style="list-style-type: none"> • Volume of alternative fuels to wood energy; • Number of units and fuel production capacity ; • Number of artisans approved in the programme; 	<p>Regional level: ECREEE monitoring report</p> <p>National level: Annual report of the ministries concerned</p>	<p>Regional level: Directorate of Energy and Mines, ECREEE</p> <p>National level: Ministries in charge of domestic fuels</p>