



AFREC

African Energy
Commission

DIAGNOSTIC REPORT AND ACTION PLAN

— JULY 2025 —



Support program for 16 African Union Member States (MS) and two (2) Regional Economic Communities (RECs) for the improvement or establishment of the National or Regional Energy Information System (NEIS/REIS)

Prepared for the South African Development Community (SADC).

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MESSAGE OF ACKNOWLEDGMENT FROM THE EXECUTIVE DIRECTOR OF AFREC —

The initiative of the African Energy Commission (AFREC) to support African Union (AU) Member States in establishing and strengthening National Energy Information Systems represents a strategic milestone for the sustainable development of Africa's energy sector. Reliable, credible, timely, and comprehensive energy data are indispensable for effective policy formulation, sound investment planning, and the successful implementation of national, regional and continental energy strategies.

This five-year diagnostic report and action plan provides a comprehensive overview of the national energy information system and proposes strategic actions for strengthening human resources capital, infrastructure and the financial requirements to modernise energy information systems. By enhancing national energy information systems, AFREC seeks to empower Member States with modern tools that support evidence-based decision-making and improve the monitoring and evaluation of energy policies, programmes, and projects.

Strengthened energy information systems will play a critical role in accelerating progress toward universal access to modern, affordable, and reliable energy services in line with Sustainable Development Goal 7 of the 2030 Agenda for Sustainable Development and African Union agenda 2063. They will also contribute to advancing Africa's broader aspirations for energy security, regional integration, and economic transformation.

On this note, the African Energy Commission expresses its sincere appreciation to the Ministries of Energy from the 16 Member States which include: Chad, Cameroon, Central African Republic, Djibouti, Eswatini, Ethiopia, Equatorial Guinea, The Gambia, Liberia, Mauritania, Mozambique, Senegal, Sierra Leone, Somalia, Togo, and Tunisia. AFREC further extends its appreciation to the national coordinators, institutions, experts, and relevant stakeholders from the participating Member States whose engagement, cooperation, and commitment was invaluable throughout the preparation of this report.

With strong political commitment and sustained collaboration among Member States, regional institutions, and development partners, the coming years present a unique opportunity to modernize and harmonize energy data systems and advance evidence-based energy planning across Africa.

The African Energy Commission (AFREC) is a specialised energy agency of the African Union (AU), mandated to develop the African energy sector through the facilitation, coordination, harmonization, protection, conservation, development, promotion of rational exploitation, commercialization, and integration of energy resources in Africa.

It engages actively with a broad network of experts and partners in the 55 AU member states, ensuring that all energy initiatives align with the future development of the energy sector in Africa and the pursuit of building 'the Africa We Want'.

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ACRONYMS

AEIS	African Energy Information System
AFREC	African Energy Commission
DISCO	Distribution Companies
EB	Energy Balance
EE	Energy Efficiency
GW(h)	GigaWatt(hours)
IAEA	International Atomic Energy Agency
IEA	International Energy Agency
IPP	Independent Power Producer
IRENA	International Renewable Energy Agency
IRES	International Recommendations on Energy Statistics
ISIC	International Standard Industrial Classification
IT	Information Technology
J	Joules
KGRTC	Kafue Gorge Regional Training Centre
ktoe	Thousands of tons of oil equivalent
l	Litres
LPG	Liquified Petroleum Gases
MAED	Model for Analysis of Energy Demand
MOU	Memorandum of Understanding
MT	Metric tonnes
Mtoe	Million tons of oil equivalent
NEIS	National Energy Information Systems
REIS	Regional Energy Information Systems
REC	Regional Economic Communities
REEESAP	Renewable Energy and Energy Efficiency Strategy and Action Plan
RERA	Regional Electricity Regulators Association of Southern Africa
SACREEE	SADC Centre for Renewable Energy and Energy Efficiency
SADC	Southern African Development Community
SAPP	Southern African Power Pool
SIEC	Standard International Energy Classification
SIEEP	SADC Industrial Energy Efficiency Programme
SWOT	Strengths, Weaknesses, Opportunities, Threats
TWG	Technical Working Group
UNSD	United Nations Statistics Division

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1 EXECUTIVE SUMMARY



A strong collaboration between the African Energy Commission (AFREC) and the Southern African Development Community (SADC) in the field of energy data and statistics is critical to building a reliable, harmonized, and actionable Regional Energy Information System across Southern Africa region. Reliable, complete, and timely energy data remains an insistent issue facing many SADC member states, further obstructing effective policy planning, investment decisions, and regional policy and infrastructure coordination. Inconsistent data collection processes, inadequate technical capacity, and fragmented statistical systems weaken efforts to produce coherent energy statistics at both the regional and continental levels.

This initiative seeks to strengthen national energy statistics and In view of reinforcing energy-related systems on the regional level, allowing for more robust, cohesive, and comparable energy data across the SADC region. This report aims to address these challenges by identifying critical gaps, formulating some recommendations at the institutional and technical levels, to provide a roadmap for enhanced data coordination—ultimately contributing to the African Union’s objective of a unified continental energy information system. This partnership is key to enabling informed energy planning, effective policy formulation, and consistent progress monitoring—essential pillars for advancing regional integration, economic development, and sustainability.

AFREC, in cooperation with SADC Secretariat, can significantly enhance the statistical capacities of SADC Member States. This can be achieved by providing targeted training, standardizing methodologies, promoting structured knowledge exchange, and aligning national efforts with continental frameworks such as the African Energy Information System (AEIS).

KEY STRATEGIC RECOMMENDATIONS

- ➔ Reinforce the Focal Points Network: Clearly define and institutionalize the roles of National Focal Points (NFPs) by supporting them with digital tools, regular capacity-building initiatives, and mandatory reporting frameworks.
- ➔ Develop an Integrated Data Protocol: Establish binding regional guidelines on data collection, including schedules, standardized formats, and quality control recommendations.
- ➔ Secure Dedicated Funding: Encourage national governments to allocate stable budgets for energy statistics, while leveraging regional and international technical and financial support (e.g., AFREC, World Bank).
- ➔ Institutionalize Data-Driven Decision Making: Embed energy data and monitoring systems in core SADC strategies, ensuring alignment with AFREC’s methodologies and tools.

The table below outlines the main areas of collaboration between the two bodies and their respective corresponding roles

Collaborative Area	AFREC Role	SADC Role
Capacity Building	Organize training workshops and provide technical support	Facilitate workshop coordination and support national implementation
Data Collection & Dissemination	• Aggregate, validate, and publish continental data • Provide SADC with relevant data	Utilize collected data and lead regional-level analysis
Policy Support	Provide analytical insights and support data-informed policy advice	Where possible, integrate AFREC data into regional policy development
Monitoring & Reporting	Develop frameworks and indicators for tracking progress	Use harmonized data for regional performance assessment

Table 1: AFREC and SADC’s respective roles for each identified area of collaboration

While part of a broader collaboration with the African Union, this specific framework focuses on SADC’s regional priorities. It aims to address unique data and institutional needs by establishing tailored energy data collection, improving data consistency and quality, and strengthening institutional capacity through shared technical expertise.

The proposed Memorandum of Understanding (MoU) seeks to build a robust, regionally responsive energy data ecosystem that supports evidence-based policymaking, aligned with SADC’s strategic goals—universal energy access, expanded generation capacity, and a strong pipeline of energy projects.

This framework would streamline reporting processes, facilitate coordination across national, regional, and continental levels, and ensure alignment with international standards. It fosters complementarity rather than duplication, bridging local realities with continental ambitions to enhance energy planning and advance the African Energy Information System (AEIS) under the AU’s development agenda.

The table below outline the main outcomes of developing a formal collaborative framework between AFREC and SADC.

Outcomes	Description
Formalized Cooperation	By creating a structured and accountable framework, strengthening cross-institutional communication channels.
Resource Efficiency	Avoids duplication, optimizes efforts and facilitates identifying funding gaps for regional programs.
Data Harmonization	Enables alignment of methodologies, indicators, and reporting standards.
Capacity Building	Facilitates joint training programs and knowledge-sharing.
Policy Coherence	Supports the development of unified regional policies under the larger continental umbrella.
Support to Member States	Encourages support to countries, especially on building/strengthening national energy information systems.
Greater Visibility and Advocacy	Elevates the importance of energy data in regional and continental energy planning.

Table 2: Description of potential results of the proposed collaborative framework

2 REGION OVERVIEW



Figure 1 Regional Map - SADC Member States

2.1 SADC

The Southern African Development Community (SADC) is a regional intergovernmental organization founded in 1980 as the Southern African Development Coordination Conference (SADCC) and then transformed in 1992 into a development organization.

Since its inception, SADC's main goal has been to foster sustainable and equitable economic growth, socio-economic development, and regional integration among its Member States. SADC is pivotal in enhancing cooperation, promoting peace and security, and driving collective development initiatives in Southern Africa. SADC comprises 16 Member States, listed as follows:

Angola	Eswatini*	Mauritius	South Africa
Botswana*	Lesotho*	Mozambique*	United Republic of Tanzania
Comoros	Madagascar	Namibia*	Zambia
DRC	Malawi	Seychelles	Zimbabwe*

* Previous cohort of country reports during the phase I of the current project concluded in 2022.

The SADC region presents significant economic and demographic potential with a combined GDP of an estimated USD 846.7 billion (2023)¹, projected to reach USD 2.1 trillion by 2043 according to the International Futures (IFs) Current Path forecast². Its combined population stood at approximately 403.8 million inhabitants as of mid-2023, forecasted to rise to 618 million inhabitants by 2043.

The SADC region faces key challenges when it comes to energy development and access. According to SADC's Regional Infrastructure Development Master Plan Assessment Report published in 2019, electricity access in rural areas stood at only 32% SADC, lagging behind other regions in Africa (100% in North Africa, and 50% on average in Sub-Saharan Africa).

The region has faced a prolonged electricity shortage since 2007, which was expected to be mitigated by 2019. However, lack of funding and adequate investment levels have hampered the development of projects intended to address this shortage. This coupled with tariffs lagging below reflective costs, insufficient project pipeline and grid-related problems have kept SADC from improving regional energy access, reliability, and security.

The Southern African Development Community (SADC) is structured to ensure effective governance, coordination, and implementation of regional priorities.

Its key decision-making structure include:

>	The Summit of Heads of State or Government – the highest decision-making body, responsible for setting strategic direction and regional policy priorities.
>	The Council of Ministers – oversees the functioning and implementation of Summit decisions and regional programs.
>	The Standing Committee of Senior Officials – provides technical support and policy advice to the Council.
>	The SADC Secretariat – the executive arm of the organization, based in Gaborone, Botswana, tasked with coordination, facilitation, and monitoring of regional integration programs.
>	Sectoral and Cluster Ministerial Committees – responsible for sector-specific oversight and implementation.
>	Specialized Institutions, such as the Southern African Centre for Renewable Energy and Energy Efficiency (SACREEE), which support SADC's energy and sustainable development goals.

Energy is recognized by SADC as a cornerstone for regional industrialization, trade, and inclusive development. The community has adopted several strategic frameworks to drive energy security, integration, and sustainability:

>	SADC Protocol on Energy – establishes the foundation for regional cooperation in energy development, aiming to harmonize national policies and facilitate the sustainable supply of energy.
>	SADC Energy Cooperation Policy and Strategy (1996) and Energy Action Plan (1997) – provide a roadmap for regional energy infrastructure development and coordination across electricity, petroleum, renewable energy, and energy efficiency.
>	Regional Infrastructure Development Master Plan (RIDMP) 2012= : Energy Sector Plan as well as the second Short Term Action Plan of the RIDMP STAP II of 2023- 2027– outlines long-term infrastructure priorities, including energy transmission and generation projects.
>	Regional Energy Access Strategy and Action Plan (2020–2030) – targets universal access to modern energy services by improving connectivity, affordability, and reliability.
>	Renewable Energy and Energy Efficiency Strategy and Action Plan (2016–2030) – promotes clean energy transitions through investment mobilization, technology adoption, and policy alignment.
>	SADC Industrial Energy Efficiency Programme (SIEEP) – supports industrial competitiveness through the adoption of energy-efficient technologies and renewable energy solutions, contributing to climate goals and economic growth.
>	SADC Regional Gas Master Plan (RGMP) (2023- 2038)- developed to increase gas to power projects in the energy mix, promoting energy transition and industrialization. SADC regional grid code to facilitate regional power trading and create enabling conditions for energy markets for private sector to participate in the energy industry as independent power producers and transmission operators.

1 - [https://www.sadc.int/sites/default/files/2025-01/Macroeconomic%20Report 2023 Final 0.pdf](https://www.sadc.int/sites/default/files/2025-01/Macroeconomic%20Report%202023%20Final%200.pdf)

2 - <https://futures.issafrica.org/>

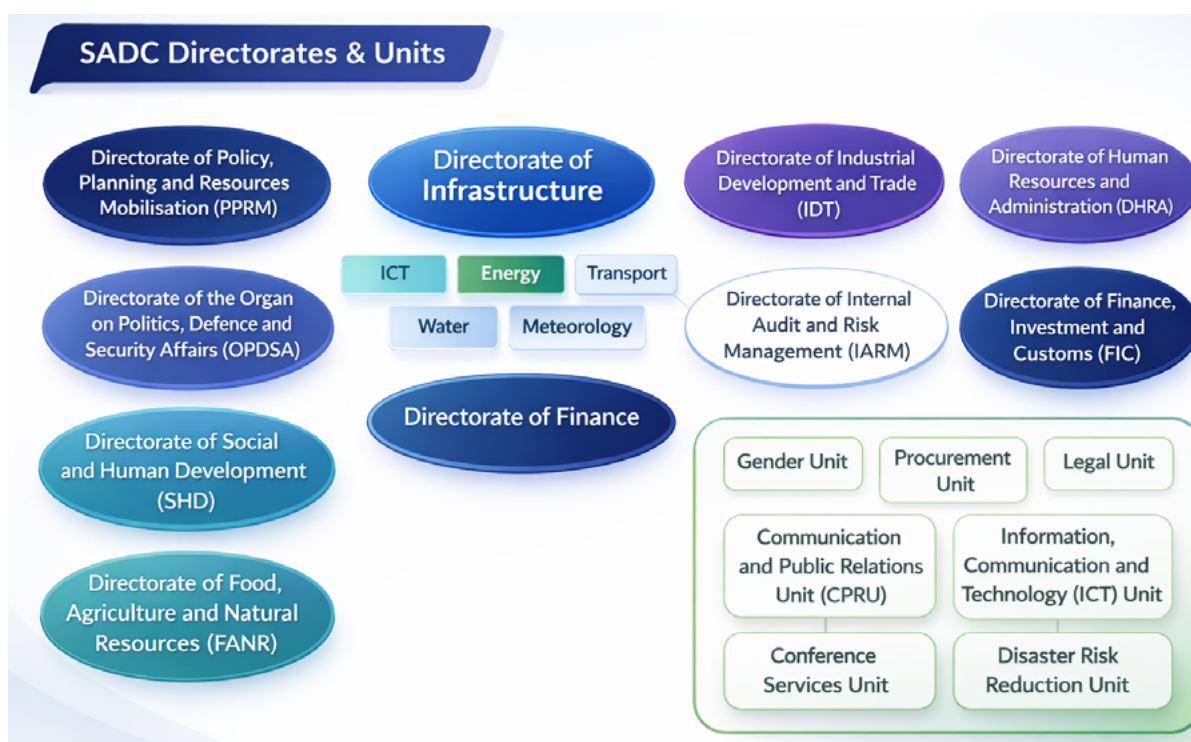


Figure 2: SADC's organizational structure

The **Energy Division** operates within the Directorate of Infrastructure, a key division of the SADC Secretariat, along with other relevant programmes covering key sectors namely ICT, Transport, Water, and Meteorology. The **Energy Division** plays a crucial role in coordinating regional energy-related efforts, advancing regional integration and socio-economic development by ensuring the availability, integration, and sustainability of energy infrastructure across Member States. The objective of the SADC **Energy Division** is to facilitate, coordinate and achieve availability of sufficient, reliable, least cost energy services that will assist in the attainment of economic growth, industrialisation and the eradication of poverty whilst ensuring the environmentally sustainable use of energy resources in the SADC Region.

The **Energy Division** Department's key responsibilities, include but are not limited to:

>	Coordinating and facilitating the advancement of regional energy infrastructure and services: the key objective is to ensure that reliable, affordable, and sustainable energy services are available throughout the SADC region.
>	Playing a central role in coordinating efforts to harmonize policies, regulatory frameworks, and technical standards among Member States to advance cooperation in energy development, trading, and access.
>	Leading efforts to foster an enabling environment to attract private sector investment and promote public-private partnerships in the energy sector.
>	Coordinating efforts to harmonize national and regional regulatory frameworks to further enhance cross-border energy trade and infrastructure development.

The **Energy Division** heads efforts to formulate and implement regional energy policies and strategies, such as the SADC Protocol on Energy, the Energy Cooperation Policy and Strategy, and the SADC Energy Action Plan. It also coordinates any regional activities or initiatives relative to the implementation of regional energy instruments and master plans, like the SADC Regional Infrastructure Development Master Plan and its Energy Sector Plan. In order to do so, the SADC **Energy Division** collaborates with various stakeholders, including Member States, regional agencies (e.g., KGRTC, SAPP, RERA, SACREEE), and international partners to mobilize resources and align efforts.

The **Energy Division's** strategic areas of action include primarily:

	Achieve Universal Energy Access
>	Ensure that at least 85% of the population has access to electricity by 2030, promoting affordable, reliable, and sustainable energy across all Member States.
	Strengthen Regional Integration
>	Ensure that all mainland Member States are interconnected through the SAPP to ensure regional integration through cross-border energy networks.
	Expand Generation Capacity and Ensure Energy Security
>	Maintain sufficient generation capacity and reserves to meet rising demand and ensure security of energy supply across the region.
	Accelerate Renewable Energy Deployment
>	Increase the use and integration of renewable energy sources to expand energy access, support energy conservation, and mitigate greenhouse gas emissions.
	Promote Energy Efficiency and Sustainability
>	Further the adoption of energy-efficient technologies and practices, particularly within the industrial sector, to support sustainable industrialization.
	Diversify the Regional Energy Mix
>	Increase the share of renewable and primary energy sources—including hydropower, solar, wind, biomass, and geothermal—in the regional energy mix.
>	Leverage Natural Gas for Industrialization
	Ensure that natural gas plays a significant role in the regional energy mix to drive industrialization.
	Build Technical and Institutional Capacity
>	Enhance the capabilities of Member States to adopt and manage modern energy technologies and practices.

The **Energy Division** oversees the execution of flagship programmes such as the Renewable Energy and Energy Efficiency Strategy and Action Plan (REEESAP) and SADC Industrial Energy Efficiency Programme (SIEEP), which aims to improve industrial competitiveness through energy efficiency and renewable energy adoption. It also aims to develop monitoring and evaluation frameworks to track the progress of regional energy initiatives and ensure alignment with strategic objectives.

The **Energy Division** collaborates closely with agencies like SACREEE to collectively mobilize financial and technical resources for regional energy projects. Among its key activities is providing technical support to Member States for the implementation of energy policies under the umbrella of regional energy policy frameworks and objectives.

3 ENERGY STATISTICS DIAGNOSTICS



This diagnostic was developed through close collaboration with the designated Focal Points (FPs) within the Energy Division at SADC. The results are based on structured interviews covering the institutions, resources, and statistical processes in place and a detailed review of data needs and challenges shared by the FPs. The appendices to this document contain a bibliography and further details on the structured interviews.

3.1 INSTITUTIONAL ENVIRONMENT

3.1.1 OVERVIEW

SADC, through its **Energy Division**, supports the elaboration and integration of not only regional energy policies and objectives but effectively coordinates the development large-scale energy projects, such as cross-border electricity transmission and renewable energy installations. This is achieved through close coordination and collaboration with key stakeholders and regional bodies.

The diagram below illustrates key regional bodies and institutions operating under the SADC energy framework, each fulfilling specialized mandates to advance regional energy integration and sustainability.

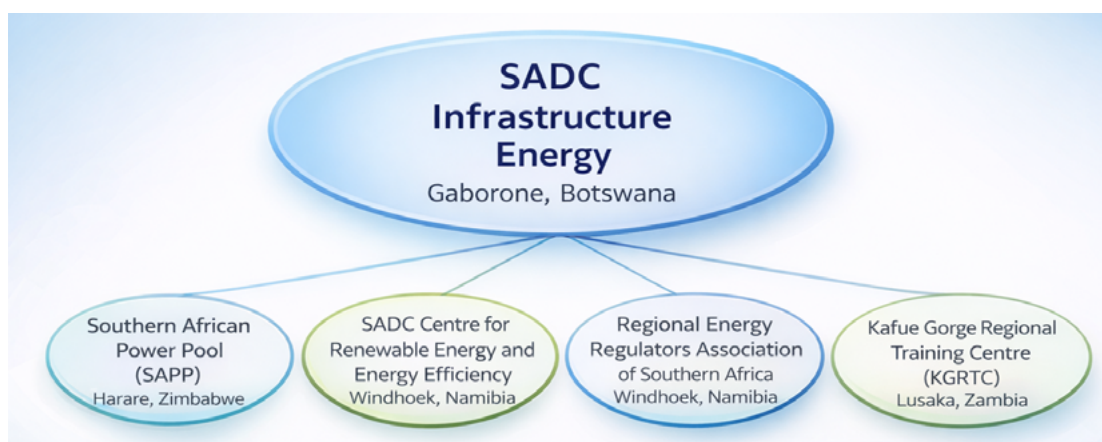


Figure 3 : SADC's Energy Affiliates

>	The Southern African Power Pool (SAPP): established In August 1995 at the SADC Summit in Kempton, South Africa. Its mandate is to create an integrated common power grid and electricity market across SADC Member States to ensure reliable and cost-effective power exchange in the region. SAPP's role consists primarily of coordinating cross-border electricity generation, transmission, and trading across SADC Member States, as well as the development and operation of a regional electricity market under harmonized technical standards.
>	The Regional Energy Regulatory Authority (RERA): established in 2002 with the aim to ensure alignment relative to policies, legislation, and standards of energy regulators across SADC Member States. SADC later aimed to transform RERA from an association to a formal authority to enforce regional decisions, as per its 2012 Regional Infrastructure Development Master Plan. RERA's main role is to facilitate regulatory harmonization for cross-border energy trade and investment, such as developing guidelines for licensing cross-border facilities, pricing, and transaction approvals.
>	The Centre for Renewable Energy and Energy Efficiency (SACREEE): Established in 2015 and headquartered in Windhoek, Namibia, the Centre promotes renewable energy (RE) deployment and advancing energy efficiency (EE). It aims to increase energy access and security across the region through increased market-based uptake of Renewable Energy and Energy Efficiency. It does so through harmonization of energy policies and standards and elaborating investment frameworks for RE projects. It also aims to advance capacity building in key areas relative to energy efficiency adoption in namely the industrial and residential sectors.
>	The Kafue Gorge Regional Training Centre (KGRTC): established in 1989 as a subsidiary organization of SADC, following a resolution by Energy Ministers of SADC and with financial and technical support from ZESCO Limited (Zambia's electricity utility), the Norwegian Agency for Development Cooperation (NORAD), and the Swedish International Development Cooperation Agency (Sida). The Centre was created to address the critical need for specialized training in hydropower and related engineering disciplines within the SADC region. Its core mandate is to provide specialized training and capacity building covering hydropower, renewable energy, and energy efficiency. The scope has broadened to cover the full energy value chain—planning, funding, generation, transmission, and distribution—with added focus on renewables, efficiency, and regional integration.

CASE ILLUSTRATING MATERIAL COLLABORATION BETWEEN THE ENERGY SUBSIDIARIES TO IMPLEMENT A SADC FRAMEWORK

These different institutions working on different facets of the energy issue, often play complementary roles, closely collaborating to advance energy access, security and the development of RE solutions, among others. The Southern Africa Renewable Energy and Energy Efficiency Strategy and Action Plan (REEESAP) adopted in July 2017 in Eswatini by the SADC Ministers responsible for Energy, is dependent on the close collaboration between these key regional institutions: SACREEE, SAPP, RERA, KGRTC and the SADC through its Energy Division.

The REEESAP outline key strategic objectives, namely, to:

>	Close the energy supply/demand gap to support economic growth and industrialization.
>	Improve access to affordable modern energy, especially for the poor, to reduce poverty.
>	Reduce risks and costs from energy imports and currency fluctuations.
>	Attract investment for renewable energy and energy efficiency projects and manufacturing.
>	Promote low-carbon, climate-resilient energy systems in the region

SACREEE leads the coordination of REEESAP, focusing on policy harmonization, capacity building, and the development of renewable energy and energy efficiency projects. SAPP supports the integration of renewables into the regional power grid, develops transmission infrastructure, and trains decision-makers in resource planning for high-renewable scenarios. While the RERA plays a critical role in harmonizing regulatory frameworks, licensing, and tariffs to facilitate cross-border renewable energy projects and resolve regulatory disputes. These efforts are then trickled down for Implementation at the appropriate level by Member States under the guidance of SADC.

3.1.2 REGIONAL ENERGY CHALLENGES

As outlined in the previous sections, SADC, through its Energy Division, has a broad and all-encompassing mandate on energy issue in the SADC region. However, SADC faces various challenging in affecting and fulfilling this mandate and collaborating effectively with the aforementioned stakeholders.

The table below outlines the key regional energy challenges currently facing SADC, which continue to hinder effective coordination, investment mobilization, and transformative progress across the energy landscape.

	Key issues/gaps	Description
1	Persistent supply shortages	The region has experienced chronic electricity shortfalls since 2007, leading to widespread load shedding, undermining socio-economic growth of local populations and hindering industrialization efforts.
2	Energy access and infrastructure gaps	Only roughly half the region's population has access to electricity, with rural access as low as 32%, with an important lag in infrastructure development due to insufficient investment, underdeveloped project pipeline, and inadequate regulatory frameworks.
3	Policy gaps and implementation challenges	Despite having developed various energy policies and strategies, SADC has struggled to effectively implement them facing various delays, lack of cohesive strategies, and conflicting interests of state members.
4	Barriers to investment	The region has struggled to move to cost-reflective tariffs impacting financial solvability along with a weak regulatory landscape that has deterred private investment and financing for energy projects.
5	Fossil fuel dependency	The region remains heavily reliant on fossil energy, with coal representing 62% of power generation according to SADC Energy Monitor 2018, underlining insufficient efforts to accelerate RE uptake.
6	Effective collaboration	Effective collaboration between SADC and stakeholders like SACREEE, RERA, and SAPP is often hindered by fragmentation of the institutional environment, insufficient alignment with regional strategies, and lacking stakeholder engagement.

Table 3 : Energy-related structural challenges

Overall, SADC's ability to meet its energy mandate is constrained by structural, financial, policy, and coordination challenges, which also affect its partnerships with regional energy institutions. Addressing these issues is critical for improving energy security, expanding access, and achieving sustainable development in the Southern African region.

3.2.1 OVERVIEW

Given the broad scope of responsibilities assigned to the SADC Energy Division and its limited human resources, energy statistics are not currently treated as a standalone priority. Instead, Energy Division officers engage in data collection and statistical tasks on a limited and ad hoc basis—primarily when such efforts directly support ongoing policy or strategic initiatives championed by SADC. As a result, statistical work is often integrated into broader programmatic objectives rather than pursued as a dedicated activity.

The SADC Energy Division is supported by two Senior Programme Officers, whose respective roles and responsibilities are outlined in the table below.

Name	Job title/ position & Institution	Role in Energy Statistics	Comments	Training/background
Moses Ntlamelle	Senior Programme Officer, Energy Division , Infrastructure Directorate, SADC	Leads energy initiatives at SADC, including ad hoc energy statistics and publications.	Time allocated to energy statistics is minimal and mostly limited to ad hoc coordination with NFPs on specific initiatives.	MSc. Energy Studies Over 25 years of professional experience in the energy sector with a focus on renewable energy and policy development
Edvan Moyo	Programme Officer, Energy Division , Infrastructure Directorate, SADC	Contributes to energy initiatives at SADC, including ad hoc energy statistics and publications	Time allocated to energy statistics is minimal and mostly limited to ad hoc coordination with NFPs on specific initiatives	Bachelor of Engineering, Master of Engineering in Electrical Power and Master of Business Administration Over 20 years of professional experience in the energy sector with a focus on hydropower and policy development

Table 4: Human resources of the Energy Division at SADC

Given the wide scope of activities delegated to the Energy Division as opposed to its limited human resources, energy statistics are not, in their own right, a high priority currently. The Energy Division officers, undertake in a limited capacity some of the energy-related data collection and statistics, If and when they pertain to existing policy and/or strategic initiative work decisively take on by SADC at large.

Among the most recent publications developed in collaboration with technical partners, the SADC **Energy Division** has contributed primarily to the following:

- ➔ The 2021 Regional Energy Access Strategy (RESASAP): with the aim to achieve universal energy access across SADC region by 2030. This publication entailed significant energy data collection, processing, and analysis covering key energy indicators namely energy access, energy generation mix, and to a lesser extent energy consumption, and outlined key targets by 2030. This work required an increased level of coordination and cooperation with some Focal Points within the respective energy ministries of Member States.
- ➔ The 2018 Renewable Energy and Energy Efficiency Status Report: a report that documented SADC's progress with regards to previously defined Renewable Energy and Energy Efficiency objectives. The report outlined key data findings with regard to the installed capacity mix, high-level energy savings in manufacturing, gender mainstreaming in RE projects, among others. The report analyzed the gap relative to the assigned targets in these key areas, and outlined key challenges in terms of regulatory fragmentation, financing shortfalls, and coal dominance.

The **Energy Division** receives regular support from the Senior Statistics Officer operating under the broader structure of the SADC Secretariat. The SADC Statistics Unit focuses primarily on macroeconomic data collection and analysis, and is responsible for key flagship publications such as the SADC Macroeconomic Statistics Bulletin, the SADC Merchandise Trade Statistics Bulletin, and the SADC Harmonized Consumer Price Indices (HCPI).

3.2.2 KEY CHALLENGES

Advancing energy statistics within SADC is critical for effective energy policy, planning, and market development, as well as monitoring and evaluating enacted policies, directly supporting the region’s objectives of furthering economic integration, industrialization, and energy access. Accurate and harmonized data allows policymakers to set attainable targets, monitor progress, and prioritize investments to bridge the supply-demand gap, expand access, and support industrialization. Ultimately, robust energy statistics would be key in forging ahead regional integration by ensuring the successful implementation of SADC’s energy strategies. However, the current structure and resources made available at SADC do not present a conducive environment to build an effective system to structure data flows, instate data collection processes, and conduct the relevant data analysis with the aim to publish energy statistics and sectoral reports.

The challenges currently facing SADC in this regard can be summarized as follows;

Institutional and Structural Challenges	
>	Energy statistics do not constitute a high priority despite their importance due to the lack of adequate human and financial resources to undertake the required level of effort. However, lack of visibility on key energy indicators and performance across the region would lead to inconsistent energy planning and underinvestment.
>	The Energy Division , whose key focus is energy policy and to a lesser extent energy statistics, and the Statistics Unit which has a broad mandate in SADC on statistics lack a concerted and coordinated mechanisms for closing the gap on energy-specific data.
>	A well-maintained active network of National Focal Points is critical for data collection. In the instance of the Energy Division , the network of NFPs has been largely inactive and underutilized for over a decade since the last engagement, severing direct links to member-state data sources.
Operational and Resource Deficits	
>	The Energy Division efforts, specifically relative to developing an energy statistics structure and activities, has suffered from chronic underfunding. In addition, the significant human resource constraints limit capacity for data processing, analysis, and dissemination. • There were plans to develop a periodic publication, an Energy Factsheet Book which were abandoned due to lack of budget.
>	There are no formal protocols for requesting energy statistics from Member States. The data gathering that does occur, is irregular and is tied to specific initiatives and projects rather than systematic processes.

Data Quality and Availability

- Irrespective of SADC's own limitations, It is often the case, as evidenced by diagnostics of National Information Systems across SADC Member States conducted under the guidance of AFREC, that Member States face their own challenges in data collection and production of comprehensive energy statistics in a timely manner due to weak statistical frameworks, adverse Institutional environments and lack of technical assistance and insufficient human and financial resources.
- Across SADC Member States, there is a clear need for rethinking statistical infrastructure, foregoing manual or fragmented systems that impede data harmonization and integration across the region.

Strategic and Collaborative Weaknesses

- Unrealized partnerships: there is no material opportunities identified with potential partners to capacity building or effective collaboration relative to enhancing SADC's capabilities in collecting data and producing energy statistics.

Lack of routine reporting, monitoring, and evaluation

- There currently no regular energy reporting disseminated publicly. The Statistics Unit's annual Yearbook covers little to no energy-related data. No mechanism exists to track progress against regional targets (e.g., REEESAP) due to data gaps.

4 COLLABORATIVE FRAMEWORK SADC AND AFREC



Building on the largely positive interactions between SADC and AFREC through various ad hoc and project-based engagements — as well as a shared and growing commitment to strengthening energy statistics at both regional and continental levels — there is a clear opportunity to establish a more structured and strategic Collaborative Framework between the two institutions.

Such a framework would formalize the partnership, allowing both parties to better identify synergies, coordinate resources and expertise, and define shared strategic objectives. In doing so, it would lay the foundation for more consistent, long-term cooperation and facilitate the development of formal mechanisms for collaboration. This approach would ensure more effective alignment of efforts, avoid duplication, and strengthen the overall impact of energy data and statistics initiatives across Southern Africa.

Fostering more effective cooperation in energy statistics would result in:

➤	Improved visibility on the performance of the energy sector and enhanced data-driven decision making
➤	Increased alignment between regional and continental energy development priorities
➤	Avoid duplication and streamline and pooling of resources and expertise where applicable
➤	Support the application of consistent methodologies Increasing data reliability and comparability
➤	Cross-institutional knowledge sharing and capacity building on key issues
➤	Harmonized policy environments to support energy planning
➤	Long-term structured cooperation beyond one-off projects or donor initiatives

This collaborative framework can be initiated by laying a strong foundation for future partnership through the development of a series of Memorandums of Understanding (MoUs). These MoUs would clearly define the scope of cooperation, shared objectives, roles, and mutual expectations, serving as a strategic cornerstone to foster mutual understanding and structure future engagement.

While not legally binding, an MoU goes beyond a simple declaration of intent. It outlines formal commitments and articulates a concrete roadmap for cooperation, ensuring clarity and alignment between both parties. As such, it represents a critical milestone in the process of transitioning from informal collaboration to a more institutionalized and sustainable partnership.

4.1.1 AFREC'S ROLE AS THE CONTINENT'S ENERGY STATISTICS CUSTODIAN

The African Energy Commission (AFREC) established in 2008 as the specialized agency of the African Union (AU) to lead, coordinate, and harmonize energy policies across the African continent. Its core mission is to foster cooperation in the area of energy among all 55 African Member States. Its objectives include:

>	Developing and harmonizing energy policies and strategies at national, regional, and continental levels.
>	Supporting joint development of energy resources and regional energy projects.
>	Facilitating research, capacity building, and technical assistance for Member States and regional economic communities (RECs).
>	Promoting the creation of reliable, updated energy information systems to support evidence-based policy and planning.

AFREC, in its founding Convention outlining its core function, holds the formal mandate relative to energy data on the continental level.

>	Article 4(b), whereby AFREC is mandated to:
	<i>"Design, create and update an energy continental database and facilitate rapid dissemination of information and exchange of information among Member States, as well as among the Regional Economic Communities (RECs)"</i>
	In its direct application, AFREC is responsible for creating and operating the African Energy Information System (AEIS), a comprehensive continental energy data hub. To do so, AFREC fulfils its mandate to collect, validate, and disseminate energy data from all Member States, supporting harmonized, up-to-date, and accessible statistics for policy, planning, and market development.
>	Article 4(c), whereby AFREC is mandated to:
	<i>"Facilitate the rapid dissemination of information and exchange of information among Member States, as well as among the Regional Economic Communities (RECs)"</i>
	This article reinforces AFREC's role in ensuring that energy data and information flow efficiently between countries and regional bodies, supporting transparency, knowledge sharing, and regional integration in the energy sector.

Pursuant to these mandates, AFREC has deployed effort to further the development of the aforementioned AEIS by conducting diagnostics of national energy statistics systems, consistently providing technical assistance and training to NFPs, and ensuring increased harmonization of data methodologies across Africa.

4.1.2 AXES OF COLLABORATION AND THEIR SCOPE

The collaboration between the AFREC and SADC, formalized through a Memorandum of Understanding (MoU), aims to strengthen their partnership in energy statistics. This work seeks to harmonize methodologies, improve data quality and accessibility, and promote information exchange across SADC Member States. By leveraging synergies between AFREC's AEIS work and SADC's regional expertise, the MoU will support the development of a reliable, centralized energy database, foster joint capacity-building efforts, and ensure that robust statistics guide policy, planning, and investment.

Ultimately, this partnership will better inform decision-makers and accelerate progress toward universal access to modern, sustainable energy in the region.

A. Energy Data Harmonization

- ➔ The MoU can include a component detailing ways to align methodologies in terms of data collection, processing, and reporting energy statistics. This could leverage existing work conducted by AFREC in terms of standardized frameworks and both phases of AFREC's project of producing diagnostics and formulating action plans for the enhancement and development of National Energy Information Systems (NEIS) which included the following SADC state members
 - o Phase I (concluded in late 2022): Botswana, Lesotho, Namibia, and Zimbabwe.
 - o Phase II (ongoing): Eswatini and Mozambique.
- ➔ Based on the AFREC's data bank and closer dialogue on possible data sourcing, data availability, and quality, SADC can utilize existing databases and structures to develop its own set of indicators relevant to the Southern African region and its own regional priorities and policy interests to better track progress to its own set of energy objectives and targets and how they subscribe into the larger continental energy goals as outlined by AFREC.

B. Capacity Building

Capacity Building is a crucial component in progressing the technical capabilities of Member States to advance energy statistics and information systems. Regularly held training and joint workshops would foster open communication and relationship-building between organizations, which is critical for sustained collaboration under an MoU. These events could also serve as a medium to coordinate ongoing projects, align objectives, and ensure that all stakeholders are working towards common goals.

By developing a common pool of expertise and resources, joint workshops can help reduce duplication of effort and promote more efficient use of available funding and personnel. They can also help identify opportunities for joint research, project development, and co-development of tools or platforms for energy data management.

- ➔ Pursuant to the existing efforts deployed by AFREC to enhance capacity building for its Member States on energy data management, energy statistics, and statistical methods, at large, the two parties can:
 - o Develop joint training programs that leverage AFREC's existing training thematic areas and content coupled with SADC's regional expertise for instance relative to its Industrial Energy Efficiency Program (SIEEP) to conduct targeted trainings. This could also utilize expertise developed by the Kafue Gorge Regional Training Centre (KGRTC) on key areas of interest for Member States. This would be material in enhancing the technical skills of staff involved in energy statistics and information systems.
 - o Convene joint thematic workshops to mitigate key knowledge deficiencies like biomass and energy efficiencies. These workshops would facilitate the exchange of information, methods, and best practices, allowing participants to learn from each other's experiences and adopt proven strategies for energy data collection, management, and reporting.

C. Improving Data Collection and Dissemination

- Streamlining and strengthening the network of National Focal Points (NFPs): Although SADC currently has a network of NFPs within its Member States' ministries of energy, it remains significantly underutilized and little activated. Similarly, AFREC also utilizes a more active network of NFPs, which can quickly multiply with an appointed FP for each energy theme (i.e., Energy Balance, Energy Efficiency, Power Plant Capacity, and Prices and Taxes). The idea is to have a common network of NFPs for energy data which is essential to facilitating regular efficient communication, organizing regional workshops, and ensuring that NFPs receive continuous training and technical assistance as provided by AFREC's capacity-building programs.
- Establish at SADC's level, a data flow channel utilizing data collected by AFREC from SADC Member States, to avoid the duplication of data collection efforts and optimize resources. Pursuant to the list of energy indicators and/or a recurrent publication identified in the step detailed above, SADC would collect from AFREC critical relevant data and disseminate internally to SADC policymakers, planners, and stakeholders. This would facilitate, in part, SADC's ability to assess energy trend and evaluate progress relative defined energy targets as part of its internal energy policies and strategies, and eventually identify data gaps needed to effectively address energy data priorities.
- Where feasible, AFREC can engage, through SADC's Energy Division, in collecting and integrating SADC's Southern African Power Pool (SAPP) data with AFREC's continental energy databases to enhance its data coverage on grid reliability and market transparency.

D. Regional Energy Policy Integration and Harmonization

- Both SADC through its Energy Protocol and AFREC through its core mission, emphasize the importance of harmonization of energy policies, strategies, and programs among Member States. This would be facilitated by AFREC's ongoing efforts to standardize methodologies and data collection practices ensure that all countries report comparable information, facilitating the alignment of national policies with regional objectives and reducing inconsistencies.
- This can be further supported by creating Technical Working Groups (TWG) for specific focus areas (e.g., renewables, industrial energy efficiency, biomass energy data collection and methods, etc.) mirroring priority themes elaborated in SADC's Regional Infrastructure Development Master Plan. This can help identify and foster collaboration opportunities at the Member States' level for optimized data collection enhancements and subsequent knowledge sharing, such as the 'Biomass Energy Survey conducted in Mozambique in 2022 with technical and financial support from AFREC
 - o In 2022, a biomass energy survey was launched in Mozambique with technical and financial support from AFREC, focusing on assessing household and small business bioenergy consumption, updating the baseline for biomass energy data, and providing detailed information on biomass use in the southern regions of Mozambique, specifically Maputo City, Maputo Province, and Inhambane Province.
- At a later stage, it would also be useful to establish a Joint Steering Committee with representatives from AFREC, SADC's Energy Division and/or Secretariat, and SADC's energy subsidiary bodies (i.e., SACREEE, SAPP, RERA, KGRTC). This Steering Committee would serve as a strategic governance body for energy statistics collaboration in the Southern African region. Its role would entail:
 - o Strategic oversight and alignment in terms of methodological harmonization and set and adapt top priorities for energy statistics collaboration. It can also define data collection targets (e.g., biomass, renewables, grid performance) in light of regional energy targets and adopted policies.
 - o Operational coordination: Nominate an active network of NFPs on energy statistics for each Member State and define appropriate communication channels to coordinate training needs and capacity building programs. Integrate any relevant data streams identified through regular discussions for instance data from SAPP on electricity generation and exchange or from RERA on tariff and regulatory metrics.
 - o Where interests align with regard to energy statistics, to jointly identify key areas of priority funding and coordinate project development. Sourcing reliable energy data from AFREC would serve to inform investment decisions by highlighting areas with the greatest need or potential for development. This supports SADC's efforts to attract private sector participation and international funding for infrastructure projects, renewable energy, and regional interconnectors.

The Table below highlights the potential main contribution by AFREC and the expected outcomes for SADC.

AFREC Data Contribution	Impact on SADC Policy Decisions
Standardized, credible statistics	Informs evidence-based, harmonized policies
Centralized regional database	Facilitates strategic planning and monitoring
Capacity building and support	Improves national and regional data quality
Data-driven investment insights	Guides resource allocation and project focus
Regional collaboration framework	Supports joint initiatives and integration

Table 5: AFREC's potential contribution and corresponding outcomes for SADC

Collaboration between AFREC and SADC on energy data and statistics is foundational for achieving reliable, harmonized, and actionable energy information in Southern Africa. This partnership underpins regional energy planning, policy formulation, and progress monitoring, thereby supporting broader goals of economic development, integration, and sustainability.

Through a strengthened partnership, AFREC—working closely with SADC—can play a pivotal role in enhancing the capacity of SADC Member States in the field of energy data and statistics. By delivering targeted training, harmonizing statistical methodologies, promoting structured knowledge transfer, and aligning national efforts with regional and continental goals, this collaboration will ensure enhanced data quality and availability throughout the region as well as to equip SADC and its Member States with the capacity building necessary for effective energy planning, monitoring, and policy formulation.

Key strategic recommendations	
➤	Reinforce the Focal Points Network: Formalize the roles and responsibilities of National Focal Points (NFPs) by providing regular training, introducing digital data collection tools, and institutionalizing periodic reporting requirements.
➤	Develop an Integrated Data Protocol: Establish binding regional guidelines for data submission by Member States, clearly defining timelines, formats, validation procedures, and quality assurance mechanisms.
➤	Secure Dedicated Funding: Advocate for sustained budget allocations for energy statistics at the national level through ministerial and SADC policy platforms, while leveraging technical and financial support from partners such as AFREC and the World Bank.
➤	Institutionalize Data-Driven Decision Making: Embed energy statistics and monitoring frameworks in key SADC strategies and ensure methodological alignment with AFREC's African Energy Information System (AEIS) standards.

Main Areas of collaboration	AFREC Role	SADC Role
Capacity Building	Training workshops, technical support	Coordination/facilitation of workshops, implementation at national level
Data Collection & Dissemination	Aggregation, publication, and dissemination	National data provision, regional analysis
Policy Support	Enabling data-driven policy advice, analytical reports if available	Policy development, integration of AFREC data
Monitoring & Reporting	Frameworks and indicators for tracking progress	Use of harmonized data for regional monitoring

Table 6: Main areas of collaboration and corresponding roles

4.2 IMPLEMENTATION PLAN

STEP 1: INITIATE BILATERAL DIALOGUE

- Organize high-level discussions between AFREC and the SADC Energy Programme.
- Align on common objectives, such as harmonizing energy data collection, enhancing data quality, and supporting Member States in energy information system (EIS) development.

STEP 2: DEFINE THE SCOPE OF COOPERATION

- Clearly outline the thematic areas for collaboration
- Standardization of energy statistics methodologies
- Capacity building and technical assistance to SADC Member States.
- Exchange of best practices and technical tools (e.g. models, templates, dashboards).

STEP 3: DRAFT THE MOU

- Include objectives, roles and responsibilities, governance structure, reporting and review mechanisms.
- Propose a high-level Joint Steering Committee for coordination.
- Define the areas for establishing dedicated Technical Working Groups (energy efficiency, biomass energy, etc.)

STEP 4: SECURE INSTITUTIONAL BUY-IN

- Share the draft MoU for internal reviews within both AFREC and SADC secretariats
- Consult with key national stakeholders (ministries of energy, statistics bureaus).
- Finalize and formally sign the MoU at a high-level event or policy dialogue

STEP 5: IMPLEMENT JOINT ACTIVITIES

- Develop an annual joint work plan
- Assign focal points and establish coordination mechanisms.
- Monitor, evaluate, and report progress through bi-annual joint meetings

Table 7 : Implementation Plan



5.1 BIBLIOGRAPHY

5.1 LIST OF INTERVIEWS

The following interviews were held with stakeholders in support of the diagnostic and action plan development:

N°	DATE	ATTENDANCE	SUBJECT
1	Dec 2024	Moses Ntlamelle (SADC) Rajia Alhabouby (IED)	
2	May 2025	Moses Ntlamelle (SADC) Philippe Garnier (IED) Rajia Alhabouby (IED)	

Table 8 : List of interviews

5.1 QUESTIONNAIRES

Included as a separate file.



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