Energy Policy Brief No. 18

Energy and SADC Industrialization

Energy security is inextricably linked to industrialization, but along with other regions of Africa, the Southern African Development Community (SADC) has some of the lowest rates of access to electricity (SADC and SARDC, 2016). Intermittent power shortages have been experienced across the region for more than a decade, and if not permanently addressed, could hinder the regional push towards higher industrial production (EPF and SAIIA, 2015).

Industrial development has been placed at the core of the developmental integration agenda of SADC, and Member States acknowledge that industrial development is central to the diversification of their economies; the development of productive capacity; and the creation of employment in order to reduce poverty and set their economies on a more sustainable path. Efficient and affordable energy is a crucial enabler for economic activity as well as for efforts to attain sustainable development.

The importance role of energy in the SADC region has never been more accentuated than now, given the SADC decision to front-load industrial development in its economic integration agenda. Energy is a critical area of the infrastructure pillar of the Revised Regional Indicative Strategic Development Plan (RISDP) and considerable preparatory work has been done in this area to develop enabling policies, systems and processes that will greatly facilitate project preparation as well as help to attract private sector investments and further promote public-private partnerships.

This Policy Brief looks at the importance of energy in the implementation of the SADC industrialization strategy. It analyses the nexus between the availability of reliable and affordable energy and the current industrialization drive by the region. It highlights the initiatives being undertaken by the region to improve energy infrastructure in support of industrialization, and outlines some policy options that SADC could adopt in order to ensure increased investment in new energy infrastructure, which together with improved management, performance and additional spending on maintenance, is a prerequisite for industrial development.

SADC Industrialization Strategy and Roadmap

The approval of the SADC Industrialization Strategy and Roadmap 2015-2063 during an Extraordinary Summit of SADC Heads of State and Government held in Harare, Zimbabwe in April 2015, represented a huge step towards economic liberation in the region and was expected to ensure that Member States harness the full potential of their vast and diverse natural resources. The strategy aims to provide the framework for major economic and technological transformations at the national and regional levels within the context of deepening regional integration.

The long-term transformation of the SADC economies requires focused qualitative and quantitative shifts in industrial structure and its enabling environment, and the interdependence with other sectors to maximize the direct and indirect value addition in the industrial sector broadly defined to include related support services (SADC, 2015).

The industrialization strategy is being implemented in three phases spanning 2015 to 2063:

- Phase I — 2015-2020
- Phase II — 2021-2050
- Phase III — 2051-2063

The first phase covers the remaining period of the RISDP until 2020. The second phase, spans 30 years, constitutes a period of "heavy lifting development" and establishing strong momentum for competitiveness (SADC, 2015). This will involve efforts to ensure that all Member States have established some level of industrial development. The final phase, covering 13 years, builds up on the momentum towards convergence with the African Union's long-term Agenda 2063.

The SADC industrialization strategy is anchored on three interdependent strategic pillars:

- ❖ ***Industrialization*** as a champion of economic transformation;
- ❖ enhanced ***Competitiveness***; and
- ❖ deeper ***Regional Integration***.

Various strategic interventions are proposed under each of these pillars. Interventions proposed under the Industrialization pillar include the creation of an improved policy environment for industrial development, increased volume and efficiency of public and private sector investments in the SADC economy, creation of regional value chains and participation in related global processes, as well as increased value addition for agricultural and non-agricultural products and services. The 39th SADC Summit held in Tanzania in August 2019 approved a Protocol on Industry, which aims to improve the policy environment for industrial development and support implementation. Once operational, the protocol will become a binding legal instrument that will give legal effect to the SADC Industrialization Strategy and Roadmap and its related Costed Action Plan.

The reduction or removal of structural impediments to industrialization is another target being pursued by SADC under the Industrialization pillar. In this regard, there is need to improve the power generation capacity and facilitate an increase in the development and use of renewable sources of energy as well as to ensure adequate water supply.

Interventions under the Competitiveness pillar are aimed at strengthening of both the macroeconomic and microeconomic environments in the region. Initiatives proposed include the development of industrial investment programmes to support small-to-medium enterprises by 2018; training for skills, entrepreneurial and managerial development; and centres of specialization for priority sectors. The SADC Centre for Renewable Energy and Energy Efficiency (SACREEE), which began operations in 2016 and is hosted by Namibia, is one such centre of specialization.

The Regional Integration pillar aims to widen the economic space for development and create incentives for industry to expand, thus providing opportunities for economies of scale, clustering and economic linkages. Specific interventions under this pillar include full implementation of the SADC Free Trade Area to cover all Member States; a common external tariff by 2025; gradual phase-down and abolition of rules of origin by 2025; liberalization of exchange controls to allow free movement of capital within SADC by 2030; and ratification of the SADC Protocol on Trade in Services for implementation by 2020.

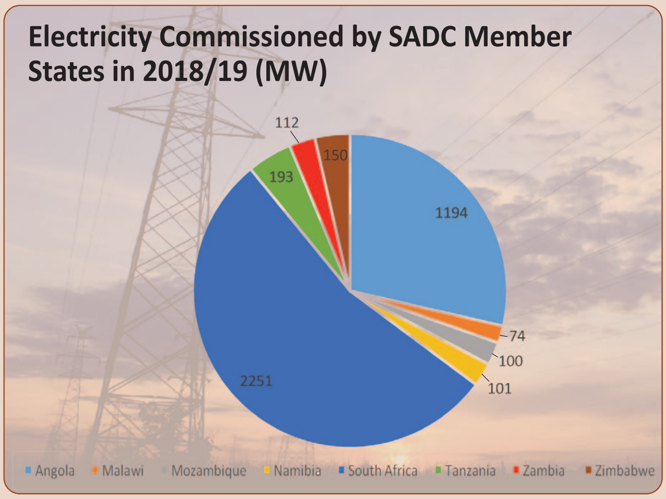
These interventions are outlined in a Costed Action Plan of the SADC Industrialization Strategy and Roadmap that was approved by an Extraordinary Summit of SADC Heads of State and Government held in the Kingdom of Eswatini in March 2017.

Regional Initiatives

Various initiatives are being pursued by the region to ensure that the energy sector responds to the demands of the industrialization agenda.

- **Electricity generation and transmission**

The SADC region has been making efforts to increase its electricity generation capacity in response to the demands of its industrialization programme. In 2018/19, the region commissioned a total of 4,175 megawatts (MW) of power from public utilities and independent power producers, as shown in the Pie Chart.



Source SADC 2019

The target is to commission 4,883MW in 2019/20. This will result in more than 25,000MW commissioned in the last 10 years.

To promote the development of the least-cost power generation and power trading, the region has been making progress in linking its various national generating plants through interconnectors and transmission systems (SARDC, 2018). To date, nine power utilities on the southern African mainland are interconnected, except Angola, Malawi and Tanzania. Some degree of integration of power networks has been accomplished, involving Botswana, DRC, Eswatini, Lesotho, Malawi, Mozambique, South Africa, Zambia and Zimbabwe.

This interconnectivity has facilitated the establishment of the Southern African Power Pool (SAPP) as a trading platform, enabling Member States with power shortfalls to purchase electricity from those with surplus within the regional energy security framework. To illustrate the importance that SADC attaches to energy development as an enabler for rapid industrialization, the region identified the revision of the SAPP Plan as one of the priority interventions needed to address constraints to industrialization. Institutional re-organization and strengthening has also allowed the region to work collectively towards creating an environment that is conducive to make SADC an attractive investment destination for energy projects.

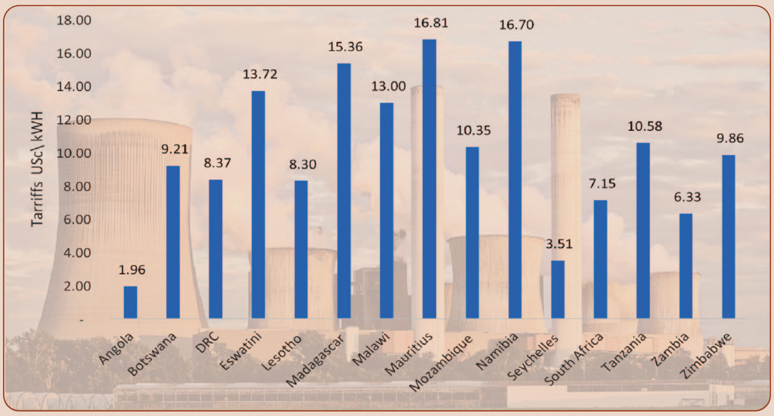
There are, however, still challenges as most SAPP member utilities are struggling to move towards adoption of cost-reflective tariffs to levels that justify private capital injections while at the same time ensuring that low-income households continue to access electricity at affordable charges. According to a report presented by the Regional Electricity Regulators Association of Southern Africa (RERA) during the SADC Energy Thematic Group (ETG) meeting held in April 2019 in Gaborone, Botswana, cost-reflective tariffs are moving targets and only Madagascar, Mauritius and Namibia had achieved or were close to achieving the target, as shown in the graph.

The tariffs for Zimbabwe were increased in October 2019 to US$10.38 cents per kilowatt hour (kWH) as part of efforts by the Zimbabwe Electricity Supply Authority (ZESA) to improve the security of supply.

- **Oil and gas**

In addition to efforts to improve the availability of electricity in southern Africa, the 37th SADC Summit held in Pretoria, South Africa in August 2017 agreed to establish a regional natural gas committee to promote the inclusion of gas in the regional energy mix and in the promotion of industrial development in the region. In June 2018, SADC Ministers responsible for Energy agreed to develop a Regional Gas Master Plan that will guide the exploitation of the vast natural gas resources that exist in the region. This should help to ensure sustainable gas exploitation in countries such as Angola,

Electricity Tariffs in SADC Member States, April 2019



Source RERA presentation to SADC ETG Meeting, April 2019

Botswana, Mozambique, Namibia, South Africa, Tanzania, Zambia and Zimbabwe where gas reserves have been determined.

The formation of a regional gas committee is an important step for the SADC region, given that the region has witnessed significant findings of natural gas in a number of countries, notably Mozambique and Tanzania. In Mozambique, the gas-to-power industry is gaining momentum as evidenced by the South African oil and gas company Sasol's planned development of a 400MW gas-to-power plant in Inhambane Province. This comes on the back of clear indications of a very healthy supply of gas in Mozambique. The United Republic of Tanzania has moved rapidly to overcome its energy deficit by developing its gas resources for use by the public and private sectors. South Africa will soon start pursuing the exploration of shale gas resources in the Karoo basin.

- **Promotion of industrial energy efficiency**

The past few years have witnessed a regional drive towards the promotion of industrial energy efficiency. SACREEE has developed the SADC Industrial Energy Efficiency Programme (SIEEP), which will inform the formulation of a policy environment that promotes industrial energy efficiency in the region. In creating policies, SIEEP will assist Member States to articulate standards, regulations, incentives, tariff structures and mechanisms such as net-metering for self-generation. SIEEP can assist Member States to develop legislations that will ensure industrial energy efficiency is adopted to ensure security of energy supply in the region.

Policy Considerations

Current plans for hydropower network connectivity and proposed new generation and transmission projects should be fast-tracked, including regional joint-ventures. In this regard, there is urgent need to accelerate the design and implementation of an appropriate institutional framework for the early development of the Inga Dam project in the Democratic Republic of Congo (DRC) which has enormous potential for the supply of low-cost electricity to the SADC region.

The current Regional Infrastructure Development Master Plan (RIDMP) should be fast-tracked and aligned to meet the needs of the SADC Industrialization Strategy and Roadmap as well as to ensure that the use of existing infrastructure capacity is optimized. Adequate measures should be put in place to ensure that implementation of the RIDMP does not lag behind. Such measures could include a coordinated mechanism to track implementation of priority energy projects.

A strategy for leveraging the RIDMP should be developed to catalyse industrial development and reduce current high costs of doing business, including those related to non-tariff barriers and local procurement of inputs for energy infrastructure development. In addition, there should be an infrastructure support programme developed specially for industrialization. Such a programme would ensure that there is a constant pipeline of financial resources to support the development of energy infrastructure and, therefore, industrialization.

It has been noted that the poor quality and inefficiency of existing energy (and other) infrastructure in the SADC region is largely due to the neglect of standards in asset procurement and operation and inadequate maintenance and management. It will be critical, therefore, for the region to ensure there is regular maintenance of existing energy infrastructure. New funding should include adequate provision for repair, maintenance, rehabilitation, reconstruction and asset replacement costs. Member States' national budgets should include increased allocations for operational and maintenance expenditure.

On a related note, Member States should increase public investment in energy provision both for domestic use and export to regional partners through the Southern African Power Pool. Attention should be paid to the reliability, efficiency and cost effectiveness of energy supply. Simultaneously, governments should step up the involvement of independent power producers to ease the burden on government investment and spending.

Alternative sources of energy should be exploited with a particular focus on renewables while considering the competitive advantage of the existing natural energy resources and variable geometry of

Member States. The region should take advantage of its status as a "treasure trove" of renewable energy sources such as wind and solar by building its electricity generation capacity.

Similarly, to ensure a sustainable regional industrial energy efficiency programme, Member States are encouraged to develop clear energy efficiency policies and strategies for their implementation. The policies should have targets for the industrial sector. Legally binding directives setting targets to be met by the SADC region and Member States should be considered. Voluntary or mandatory approaches can be adopted working in partnership with the regional standards bodies, such as SADC Cooperation in Standardisation (SADCSTAN) and the involvement of the private sector.

Focus should also go towards the development of the oil and gas sector, given the reserves that have been identified in the region lately. This would call for the fast-tracking and adequate resourcing of the proposed Inter-State Gas Committee. Similar attention should be paid to harnessing the benefits derived from the massive oil reserves that reside in the region.

SADC should exploit the enormous potential offered by its ocean resources under the Blue Economy Initiative in order to catalyse industrialization and economic transformation. The opportunities under the Blue Economy Initiative include, among others, renewable energy, fishing, shipping, oil and mineral exploration. In this regards, the Blue Economy Initiative should be mainstreamed in developing the infrastructure required to accelerate industrialization.

To close financing gaps, action will be needed across the policy spectrum. Governments will need substantial funding for infrastructure development of energy and soft infrastructure as well as funding for human capital development and access to technology. Almost certainly this will require greater private sector participation, with potentially far-reaching implications in respect of public-private projects and the commercialization or privatization of infrastructure industries.

A well-resourced Regional Development Fund is a pre-requisite for accelerated regional industrialization. The planned SADC Development Fund should be urgently operationalized as a regional development bank with the capacity to attract international funding.

Finally, there is need to strengthen efforts to tap into domestic sources of funding. Possible sources include taxes, the domestic banking sector, private equity funds, public-private partnerships, sovereign wealth funds, remittances, and pension funds. Mechanisms could be put in place to access funding for energy infrastructure development from these domestic sources.

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