

# There's opportunity to localise components in the T&D value chains

The Localisation Support Fund (LSF) released a report on the findings of a study on the value chain mapping of the South African transmission and distribution networks and the allocation of the South African Manufacturing Capability to the value chain elements, which highlights anticipated growth in the electricity transmission and distribution (T&D) value chain; and opportunities for localisation within the T&D value chain.



Thami Moatshe, executive head of the Localisation Support Fund (LSF). Image supplied

In line with national efforts around securing energy supply, the LSF initiated the study to understand the local manufacturing capability for components used in the T&D network. The study provides a list of value chain systems and products with an emphasis on local manufacturing. Furthermore, it maps out manufacturing capability against the manufactured products active within the value chain to identify manufacturing import gaps.

The findings of the study present a detailed analysis of South Africa's local manufacturing capability within the transmission and distribution value chain.

Speaking at the round table discussions on the findings of the study, Thami Moatshe, executive head of the LSF said, "By effectively coordinating the country's manufacturing capabilities and understanding the challenges and opportunities in localisation within the transmission and distribution value chain, we can leverage opportunities for job creation, capitalise on the capabilities of both local and foreign manufacturers in the T&D value chain, and in turn, create avenues for skills development while working in collaboration with academia on programmes such as the Eskom Power Engineering Programme (EPEP)."



## SA's manufacturing sector and the golden opportunities for SMEs

Business Partners Limited 25 Jul 2023



The Eskom Transmission Development Plan (TDP) of 2022 estimates that 53GW of new generation capacity will be added to the network between 2023 and 2032. For this to happen, significant Transmission and Distribution (T&D) investment of more than R70bn for transmission alone, is needed in the next five years and it is estimated to grow by more than three

times that in the five years that follow.

This increase was estimated by using a simple extrapolation based on the length of the powerline and the number of transformers needed in the latter five years when compared to that for the first five years, and it was meant to give an indication of the scale of the growth anticipated. Therefore, for the next 10 years, between R288bn to R360bn of transmission-grid-related investment is anticipated.

### **Refurbishing the aging infrastructure**

This, in addition to refurbishing the aging infrastructure already in the system, will create opportunities for localisation of the manufacturing of transmission and distribution components. The energy VC manufacturing sector, for example, has the capability to manufacture 33% of the components locally.

The report shows that South Africa has the capability of local manufacture of powerline-related products close to 100%. Given the growth in demand, local capability can be expanded, strengthened, and prepared for export. The spend for powerlines could be in excess of R140bn in transmission and R25bn in distribution in the next 10-15 years.

Furthermore, the Transmission substation-related products are largely (>80%) comprised of imported items (e.g., large power transformers, shunt reactors, switchgear, instrument transformers, and PTM&C products).

### **Foreign partnership can assist in localisation**

According to the LSF, partnerships with foreign players experienced in this field can assist in promoting localisation efforts. The distribution substation-related products are comprised of both imported items and locally manufactured ones. The split is approximately 60% local and 40% imported. There is an opportunity for increased localisation in these areas, including transmission.



**Localisation is the key to expansion, security and survival for specific industries, study shows**

Katja Hamilton 20 Oct 2022



For example, South Africa has the potential to leverage its track record for Class 0 and 1 transformers (Low Voltage -LV and Medium Voltage - MV) and emerge as a significant player in the global export market. A sustained level of demand can lead to reduced production costs, which can drive down prices to enable the competitiveness of local products for export.

With an envisaged large build programme, there is a significant opportunity for skills development, job creation, localisation, and the establishment of sustainable export opportunities.

The report notes that, despite the South African government's support for innovation and the willingness of companies and

utilities to embrace it, the regulatory structure presents a significant hurdle to the adoption of innovative devices and systems.

“Given the expected expansion of the industry encompassing Eskom, municipalities, and independent power producers (IPPs) in response to the demands for network reinforcement, expansion, replacement, refurbishment, and the implementation of a new construction programme, there are significant opportunities for local suppliers to enhance their manufacturing capabilities,” Moatshe highlighted.



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“Added to this is the emergence of independent power producers and the need at the local government level to upgrade and expand their own power grids. All these projects will need new, innovative products, and the refurbishment, upgrading, or replacement of existing networks.

This study has revealed that while South Africa has the capability, locally, to manufacture most of the components needed for the transmission and distribution value chain, certain challenges and constraints faced within the value chain have to be addressed.

These include inconsistent workload for local suppliers, delays/deferrals of capital projects, access to and high cost of raw materials compared with competing developing countries, low costs of imported products, compliance to regulations and standards, shortage of skilled workforce, and limited capability of R&D and innovation,” Moatshe added.

View the full report [here](#).

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