



Powering Egypt's Future: The Impact of Renewable Energy on the Distribution Transformer Market

by Aleena Ahmad, *Research Analyst – at Power Technology Research*

- Distribution transformers carry out the final transformation of voltage in the electric power distribution system.
- Egypt's transformer market is expected to grow with a CAGR of 5% in the next five years.
- The dry type distribution transformer market of Egypt will grow at a faster rate compared to the oil type.

Distribution transformers carry out the final transformation of voltage in the electric power distribution system, essentially stepping down voltage in the distribution lines to a level acceptable by consumers (11 kV to 0.4 kV). In terms of revenue, the global distribution transformer market accounted for USD 13.9 Billion in 2021, while the distribution transformer market of Egypt is relatively quite small and accounted for a mere USD 91.8 Million in terms of revenue.

Egypt's transformer market is expected to grow with a CAGR of 5% in the next five years, mainly under the influence of several factors.

Factors Influencing the Distribution Transformer Market

A number of factors are expected to influence the distribution transformer market of Egypt, including the adoption of renewable energy, growing urbanization, government policies, and the Sustainable Development Strategy (SDS): Egypt Vision 2030.

Renewables

According to the International Energy Agency, Egypt's power generation capacity is expected to grow from around 59 GW in 2021 to 71 GW in 2027. The country currently has tremendous potential for solar and wind energy because of its abundant land, sunny weather, and high wind speeds. As per the estimates of the IEA, the percentage of renewables in the energy mix is expected to increase from 6% in 2021 to 12% in 2027, with solar and wind energy growing at 17% and 18% respectively during this time period.

Egypt has also developed the Integrated Sustainable Energy Strategy (ISES) 2035. This has set a target of generating 20% of electricity through renewable generation by 2022 and 42% by 2035, with wind contributing 14%, hydro power 2%, photovoltaic (PV) 22%, and concentrated solar power (CSP) 3% by 2035.

This increase in the generation capacity (including renewable generation capacity along with conventional generation) will require an expansion of the transmission and distribution infrastructure in the country, effectively driving the distribution transformer market of Egypt.

Sustainable Development Strategy (SDS)

Egypt Vision 2030 provided the country with a long term political, economic, and social vision that is in line with the Sustainable Development Goals (SDGs) of the United Nations. Under this vision, the manufacturing growth rate target has been increased to 10% for 2030, up from the set target of 7% for 2020. This would drive the growth in the industrial sector which, in turn, would positively impact the distribution transformer market. On the other hand, under SDS, Egypt is targeting reductions in greenhouse gas emissions from the energy sector by 10% till 2030. This would require the country to not only adopt renewable generation but also upgrade the T&D sector accordingly, so that clean power may be evacuated (upgradation of T&D sector will drive the growth of distribution transformer market).

Urbanization

Increased urbanization is another factor leading to the growth in Egypt's distribution transformer market; the country's current annual urban growth rate stands at 2%, meaning that Egyptian cities have to accommodate a million new citizens per annum. A significant share of Egypt's land area is desert with no human settlements, leaving only 6% area being densely populated. This area is expected to increase to 12% as the government of Egypt is planning to build new cities in the desert which would require distribution transformers to serve load.

Government policies

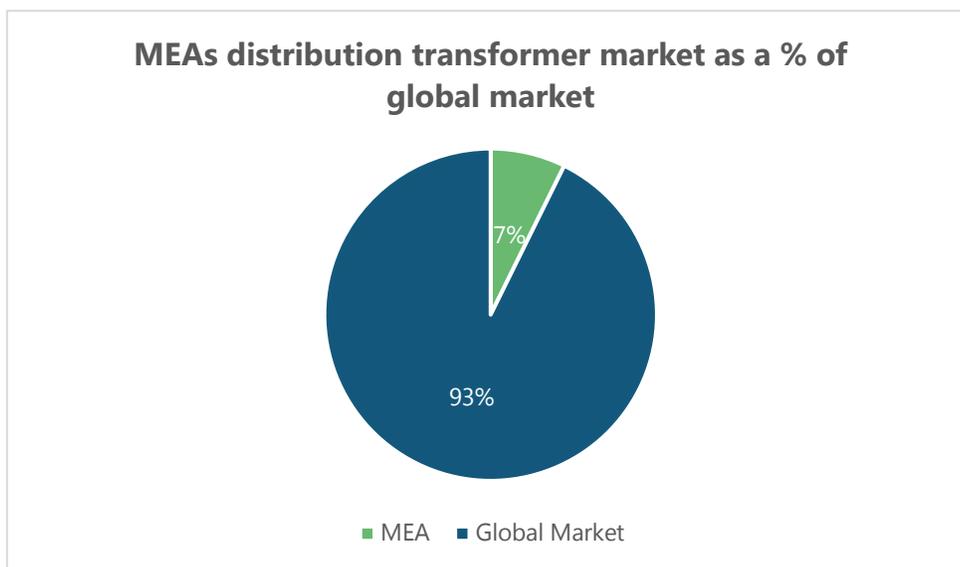
The government of Egypt is trying to attract investments from the private sector, especially for installing additional generation and T&D capacity in order to meet the goals for 2035. The Egyptian Electricity Holding has a monopoly over the electricity sector involving generation, transmission, and distribution in the country. The country is planning to initiate the privatization of the sector by 2025, which would allow the electricity market model of Egypt to transition from a state-owned monopoly model to a fully competitive market model. This would eventually enhance the efficiency of the overall power sector and increase private participation, leading to growth in the sector.

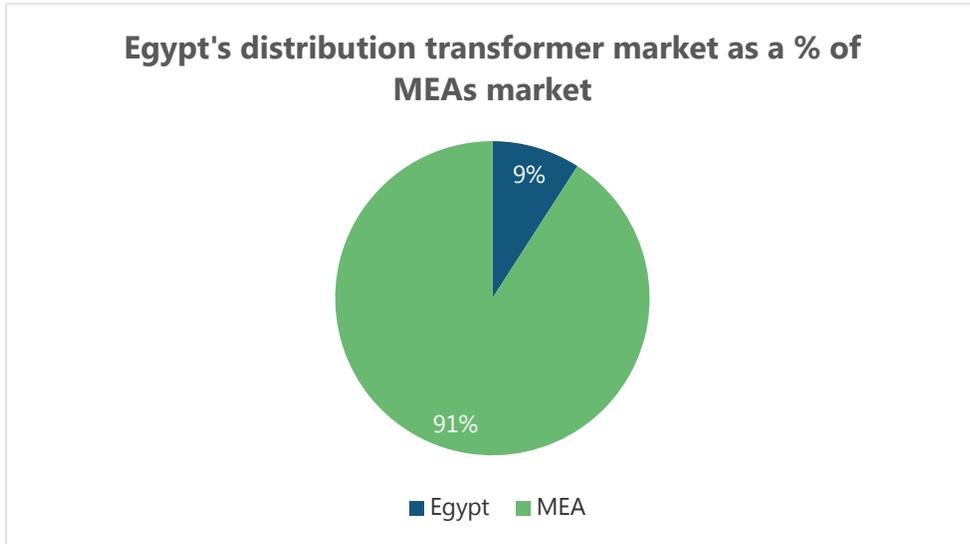
Investments in T&D network

Egypt's renewable capacity increased from 1.2 GW to 3.4 GW between 2018 and 2021, a considerable increase; however, the proportionate expansion of the T&D infrastructure did not take place as required. This led to several projects/investments being undertaken in the T&D sector in 2021. It is expected that similar investments in the sector would be required to facilitate the evacuation of power from generation assets which, in turn, would be driving the distribution transformer market of Egypt.

Looking Ahead

The annual distribution transformer market of Egypt is expected to grow with a CAGR of 5% in the next 5 years, as per the estimates of Power Technology Research. It is also expected that the dry type distribution transformer market will grow at a faster rate compared to the oil type, because the dry type is linked with the growth of renewable energy. As far as the application verticals are concerned, the largest proportion of growth in Egypt's distribution transformer market is coming from generation, followed by the distribution sector (where increasing urbanization is leading to the expansion of the grid) and industry (which is growing but at a slower rate). Furthermore, the electrification of the transport sector, a significant factor driving the distribution transformer market all over the world, is not applicable to Egypt because the adoption of electric vehicles is extremely slow in the country and even in the region.





Contact:

Hassan Zaheer - Exec. Director Client Relations & Advisory

+49-89-12250950

hassan.zaheer@ptr.inc