



## Global Distribution Transformer Landscape

by Aleena Ahmed, *Research Analyst* at Power Technology Research

- According to Power Technology Research, USD 187 billion is expected to be invested into the distribution sector globally in 2021.
- The distribution transformer market in the North American region will be driven by renewable capacity additions in the U.S. and Canada followed by the replacement of the aging grid infrastructure in the U.S.
- According to Power technology Research, the annual market of distribution transformers in 2020 was USD 3.59 billion.

Distribution transformers which are installed on the distribution side are an essential component of power systems globally used to step down voltages to distribution levels mainly 240/120 V from higher voltage levels. The global distribution transformers market is directly linked with investments in the distribution sector and various other factors depending on the region whose distribution transformers market is under discussion. In this article we have discussed distribution transformer markets of APAC, Europe, MEA, South America, North America.

According to Power Technology Research, USD 187 billion is expected to be invested into the distribution sector globally in 2021. This is an 11% increase in the investment year on year in 2021. In 2020, the distribution sector experienced a dip in investments because of COVID-19 and its associated lockdowns which dropped by 7% the next year. Globally, investments in the distribution sector are expected to grow owing to several factors ranging from industrial growth to renewable generation targets followed by infrastructure development projects and electric vehicle (EV) uptake.

## APAC

Driven mainly due to growth in the manufacturing sector of Vietnam and T&D project being carried out in India, the distribution transformer market in this region is expected to grow from 2021-2025. Vietnam is becoming an attractive destination for manufacturing mainly due to U.S.-China trade wars that were escalated during Trump's regime followed by rising labor costs in China. Covid-19 on the other hand has also provided a push, making the world realize that what they thought was a global supply chain was in fact a Chinese supply chain. Hence, diversification was required which led OEMs to shift from China to Vietnam hence triggering growth in the manufacturing sector in the country.

T&D projects or targets are also expected to drive the growth of the distribution transformers market in the APAC region. For instance, India has set an annual target of 81,545 MVA additional transmission in the FY21-22 capacity, out of which 13% accounting for 10,392 MVA has been added till Jun 2021. On the other hand, India set an annual target of 19,255 Ckt km of transmission lines in the FY21-22 where 8% of the target was met by Jun 2021 accounting for 1,550 Ckt km.

## Europe

The European distribution transformer market is expected to grow from 2021-2025 mainly due to EU's renewable energy targets and its EV uptake. EU, as per the Fit for 55 package, has set a target of 40% renewables of the total energy mix by 2030, raising it from 20% renewable in the generation mix in 2019 while replacing the previous target of 32% renewables in the energy mix. To meet the target of 40% renewables till 2030, the share of renewables will be required to increase by 1.1% annually. In addition to this, Europe currently has 3.1 million passenger EVs which constitute 30% of the total passenger EVs in the world. These numbers are expected to grow which in turn will create demand for distribution transformers in the region.

## MEA

The distribution transformer market of the MEA region is expected to grow the most from 2021-2025 with power generation capacity additions in KSA and development projects in the region being the main growth drivers. GCC plans to add 43 GW of additional power generation capacity by 2025 followed by 664,000 MVAs in transmission capacity over 10 years. Both targets will translate into capacity additions in the distribution segment as well. Other than that, Saudi Arabia is also building nuclear power reactors including the KA-CARE nuclear power plant which is a project worth USD 33.4 billion. Similarly, the nuclear power plant KAPP Al Khiran IWPP (Phase-1) which will cost USD 488 million is being constructed in Kuwait. Further, South Africa's largest utility is planning an investment of USD 7.2 billion aimed at increasing the contribution of renewable energy in the generation mix by 2030.

Saudi Arabia is also investing USD 500 billion in the Neom City Development Project. In parallel, Kuwait is investing USD 13.9 billion in the Al-Khiran Residential City Development Project and Qatar is investing USD 8.3 billion in the Lusail City Development Project. Transformer demand in this region is directly linked with these infrastructure projects that Saudi Arabia, Kuwait and Qatar are pursuing.

## South America

In Latin America, Chile is leading the electrification drive. The country had electric buses in excess of 800 by as early as December 2018. Following Chile, Colombia, Costa Rica and Panama have also announced their national electric mobility strategies. Countries are providing rebates, reduced taxes, and lowered retail prices to push the electrification of the transport sector. Additionally, Brazil has increased its investment in renewables by 74% which is further expected to drive the market of distribution transformers along with the electrification of the transport sector in the coming years.

## North America

The distribution transformer market in the North American region will be driven by renewable capacity additions in the U.S. and Canada followed by the replacement of the aging grid infrastructure in the U.S. The U.S. is well on track to provide 33-50% of its electricity through renewables by 2030 as to where Canada has set a target of enhancing the share of zero emitting sources for power generation to 90% by 2030. In addition to this, we know that most of the investments in the grid infrastructure of the U.S. were made in the 1950s-1980s and now the country has an aging transformer fleet with 70% of the fleet older than 25 years and approximately 15% already exceeding the average life expectancy of 40 years. The replacement of the grid infrastructure is, thus, paramount and expected to generate demand for distribution transformers in the coming years.

Region	Annual Market in Billion USD
APAC	3.59
Europe	0.95
MEA	0.81
North America	1.47
South America	0.51

Figure 1: Annual market of distribution transformers in billion dollars (2020).

Source: Power Technology Research

## Looking Ahead

According to Power technology Research, the annual market of distribution transformers in 2020 was USD 3.59 billion in APAC, USD 0.95 billion in Europe, USD 0.81 billion in MEA, USD 1.47 billion in North America, and USD 0.51 billion in South America. However, Power Technology Research predicts that among all of these regions, the highest growth in the period 2021-2025 in the distribution transformers market segment will be observed in the MEA region. Nearly half a trillion dollars are going to be invested in the development of new cities in KSA, Kuwait, and Qatar followed by conventional and renewable power generation capacity enhancements along with transmission capacity additions planned for the next 10 years in this region.

### Contact:

Hassan Zaheer - Exec. Director Client Relations & Advisory

+49-89-12250950

([hassan.zaheer@powertechresearch.com](mailto:hassan.zaheer@powertechresearch.com))