Trends in pricing/cost of equipment — Raw material prices (2/2)

Outlook for equipment prices

- According to the World Bank, its Metals and Minerals Price Index fell 4.7 per cent in the Q12020 following two consecutive quarterly declines. The fall reflects a sharp slowdown in global manufacturing activity due to the COVID-19 pandemic, despite unprecedented stimulus measures to support demand.
- The COVID-19 pandemic has largely affected aluminium and copper price. Despite the weak demand, there were limited cutbacks in aluminium output in China—which accounts for more than half of global aluminium production. In contrast to metals, iron ore prices gained 2.4 per cent in the first quarter of 2020, after a decline in last quarter of 2019. The price increase largely reflects weather-related supply disruptions, and robust steel production in China. Further, steel mills have not cut production in response to the pandemic due to the high costs of restarting idled plants.
- The iron ore prices are expected to be less stable due to global economic uncertainties. With continuing policy and geopolitical challenges, its likely to steadily decline by 2030.
- While the price of aluminium and copper prices are expected to remain relatively stable over the coming years, the final price of transmission equipment will depend upon factors such as expected tariffs on imports of raw materials, interest rates and freight costs, among others. These factors may necessitate an increase in equipment prices over the medium term.

Figure 3: Forecast for global aluminum and copper prices (USD per mt)

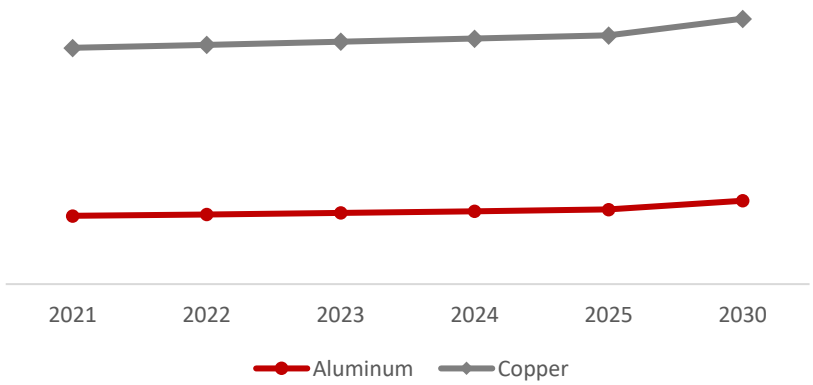
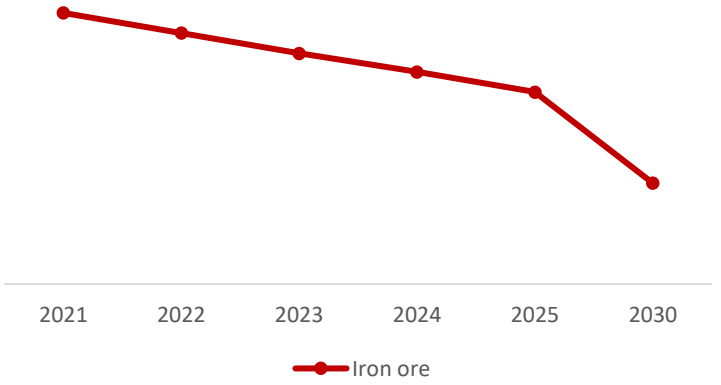


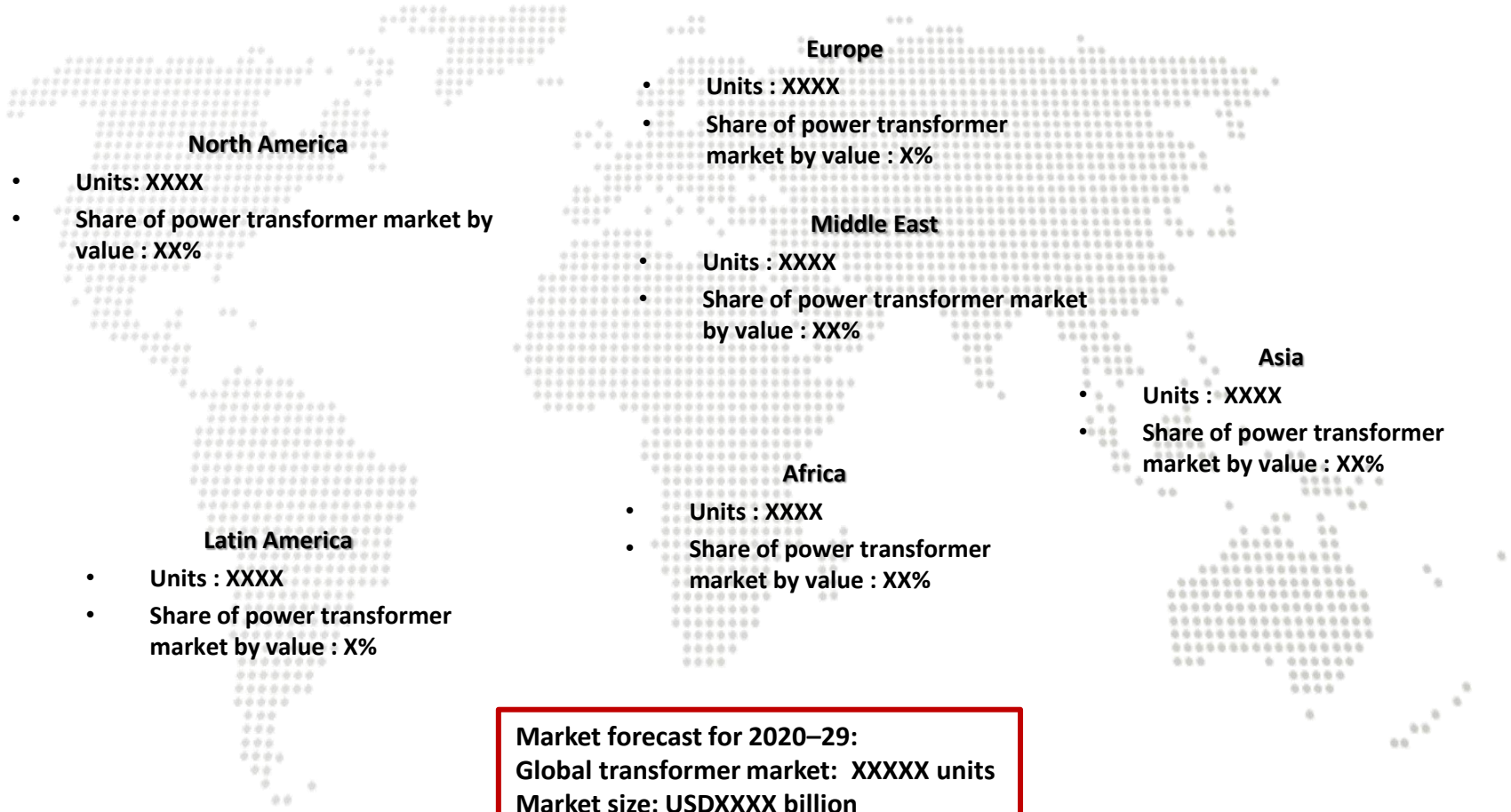
Figure 4: Forecast for global prices of iron ore (USD per dmt)



Note: The data represents prices at constant USD; mt: metric tonnes; dmt: dry metric tonnes.
Source: The World Bank

Market forecast for power transformers, 2020–2029

Global demand for power transformers (units and value)



North America

- Units: XXXX
- Share of power transformer market by value : XX%

Europe

- Units : XXXX
- Share of power transformer market by value : X%

Middle East

- Units : XXXX
- Share of power transformer market by value : XX%

Asia

- Units : XXXX
- Share of power transformer market by value : XX%

Latin America

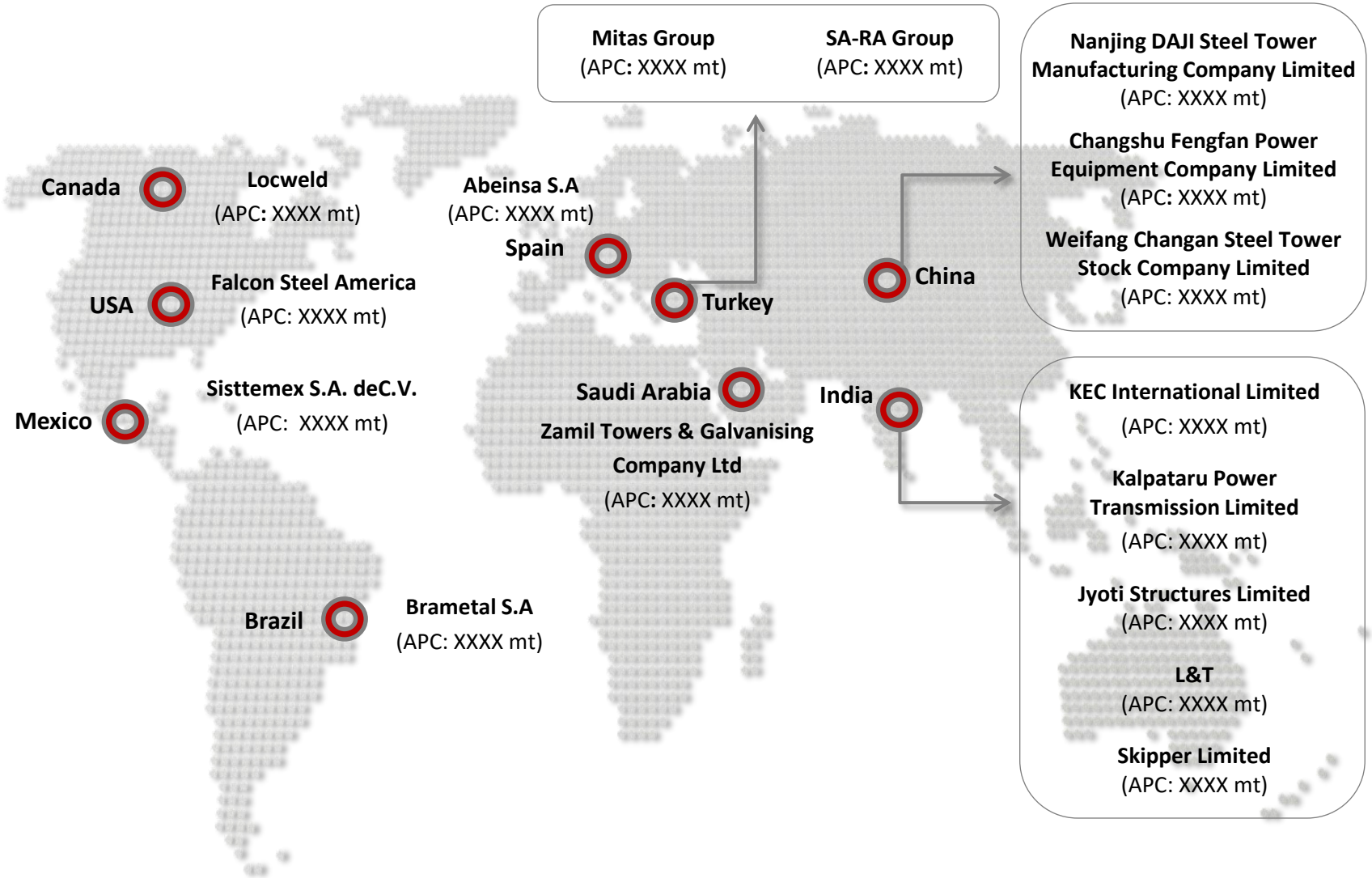
- Units : XXXX
- Share of power transformer market by value : X%

Africa

- Units : XXXX
- Share of power transformer market by value : XX%

Market forecast for 2020–29:
Global transformer market: XXXXX units
Market size: USDXXXX billion

Major players in transmission towers market



Note: APC: annual production capacity; mt: metric tonne; Data provided in the above diagram is based on information available in the public domain.

Source: Global Transmission Research

Impact of COVID-19

Near term impact and expected recovery time

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

- XXXXX XXXXX XXXXXXX
- XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXX

- XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXX XXXXXX XXXXX XXXX
- XXXXXXXX XXXXX XXX XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXX XXXXXX XXXXX XXXX
- XXXXXXXX XXXXX XXX XXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXX XXXXXXXXXXXXX

Resumption of construction works is key challenge

- The most significant challenge is the resumption of construction works of these projects and the catch-up plan to accelerate activities to meet the completion targets.
- Further, the implementation of various community quarantine measures of different local units are impacting personnel mobility as well as access of personnel to project construction sites moving forward.

Global demand — Tower tonnage, by voltage

Expected demand for transmission towers (by tonnage)

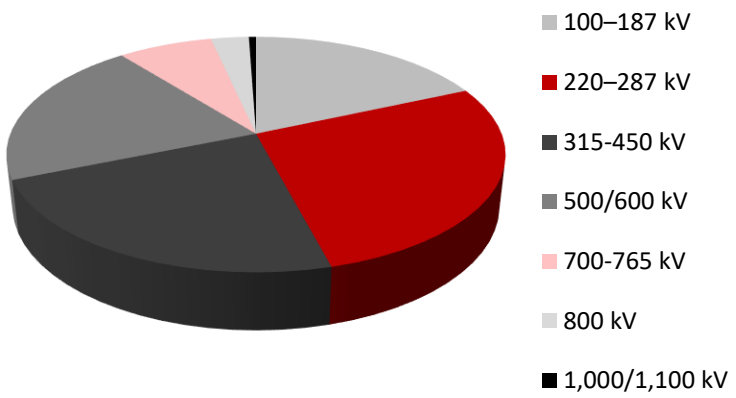
Table 2: Estimated global demand for towers during 2020-29 (tonnes)

Voltage	Towers (tonnes)		
	2020-24	2025-29	Total
100–187 kV	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX
220–287 kV	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX
315–450 kV	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX
500/600 kV	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX
700–765 kV	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX
800 kV	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX
1,000/1,100 kV	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX

Note: AC – alternating current; DC – direct current
Source: Global Transmission Research

- The total global transmission tower market (as per tonnage) during 2020-29 is estimated at over XXXX tonnes.
- About XX % of the total tower demand (in terms of tonnage) will be at 220–287 kV, 23% at 315–450 kV, XX % at 500/600 kV, XX % at 100–187 kV, and XX % at 700–765 kV. UHV projects will account for the remaining XX% of the tower demand.
- AC projects are expected to account for XX% of the total tower (tonnage) demand during 2020–29.

Figure 3: Demand for tower tonnage by voltage during 2020-29 (%)



Global demand — Market size, by voltage

Expected market size for transmission towers (USD million)

Table 3: Estimated market size for towers during 2020-29 (USD million)

Voltage	Transmission towers market (USD million)		
	2020-24	2025-29	2020-29
100–187 kV	XXXX	XXXX	XXXX
220–287 kV	XXXX	XXXX	XXXX
315–450 kV	XXXX	XXXX	XXXX
500–765 kV	XXXX	XXXX	XXXX
800–1,100 kV	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX

- The market size for transmission towers is estimated to be around USD XXXX million for the period between 2020 and 2029.
- About XX% of the total tower market (in terms of USD million) is expected to be at 500-1,100 kV range during the 2020-29 period. Another XX% will be at 110–187 kV and XX% at 315–450 kV.

Figure 4: Market size for transmission towers by voltage during 2020-29 (USD million)

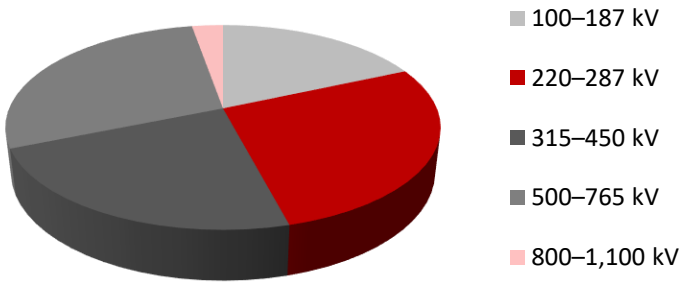
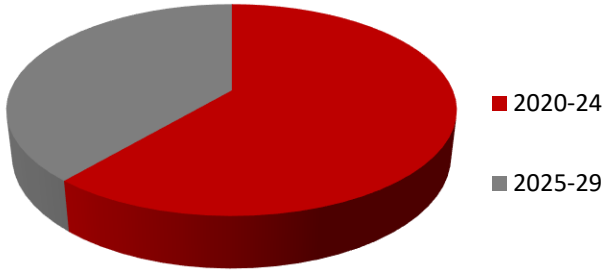


Figure 5: Market size for transmission towers by time period during 2020-29 (USD million)



Note: The estimated market size represents the total revenue generated from expected sales of towers based on demand.
Source: Global Transmission Research

Region-wise demand — Insulators units

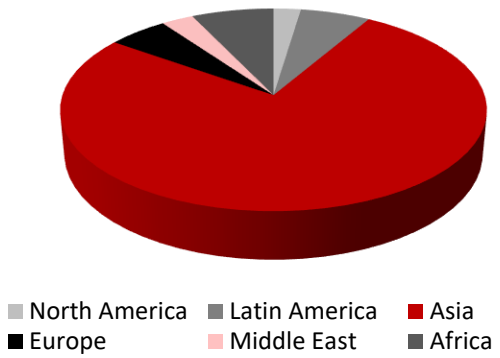
Table 3: Estimated demand for insulator strings/insulator sets by region during 2020-29 (number)

Voltage	North America	Latin America	Asia	Europe	Middle East	Africa	Global
100–187 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
220–287 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
315–450 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
500/600 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
700–765 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
800 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
1,000/1,100 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Note: AC – alternating current; DC – direct current
Source: Global Transmission Research

- During 2020-29, XX% of the total demand for insulator strings/insulator sets will be from Asia, while Latin America, Europe and Africa are expected to account for XX% each.
- North America and the Middle East are expected to account for a XX% share each.

Figure 5: Demand for insulators by region during 2020-29 (%)



Region-wise demand — Market size for insulators

- The market size for insulator strings is estimated to be around USD XXXX million for the period between 2020 and 2029. About XX% of the demand will arise from the Asia Pacific region. Majority of this demand is expected to come from in Chinese and Indian market. Further, the fast paced development of DC-based transmission is expected to drive the demand for HVDC insulators in the coming years.
- With the ageing of transmission asset in many developed countries are likely to be a key replacement market for many insulators manufactures, as despite insulators accounting for XX% of the capital cost, they require XX% of the maintenance costs of transmission lines.

Table 4: Estimated market size for insulator by region during 2020-29 (USD million)

Voltage	North America	Latin America	Asia	Europe	Middle East	Africa	Global
100–187 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
220–275 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
330/400 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
500 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
765-1,100 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Figure 6: Market size for insulator strings by region during 2020-29 (USD million)

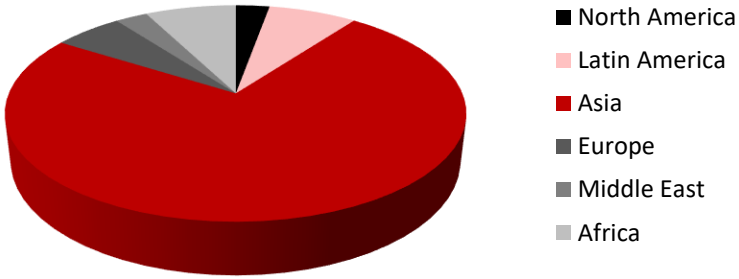
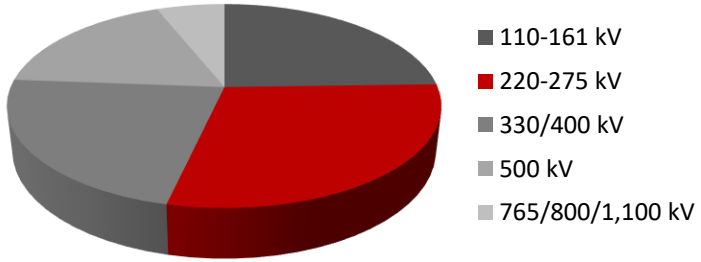


Figure 7: Market size for insulator strings by voltage range during 2020-29 (USD million)



Note: INMR: Insulator News and Market Report; market size represents estimated revenue generated from expected sales of insulators based on demand.
Source: Global Transmission Research

Underground and undersea cables — Route length

Expected demand for undersea and underground cables (by km)

Table 13: Estimated demand for underground and undersea cables during 2020-29 (km)

Voltage	2020-24			2025-29			2020-29		
	USC	UGC	Total	USC	UGC	Total	USC	UGC	Total
138–161 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
230–287 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
315–345 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–AC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
–DC	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Note: AC – alternating current; DC – direct current; UGC – underground cable; USC – undersea cable
Source: Global Transmission Research

- Approximately XXXX km of underground and undersea cables are expected to be added to North America's high voltage grid network during 2020–29.
- Of the total planned cable addition in 2020–29, XX% will be based on DC technology.
- Majority of the cables are planned during 2020–29 will be laid undersea.

Figure 20: Demand for cables by voltage during 2020–29 (%)

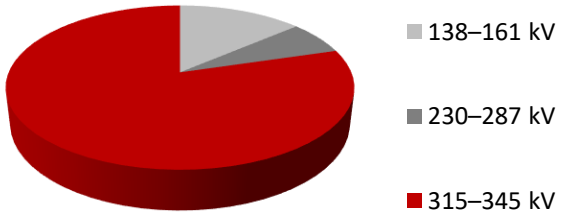


Figure 21: Demand for cables by technology during 2020–29 (%)

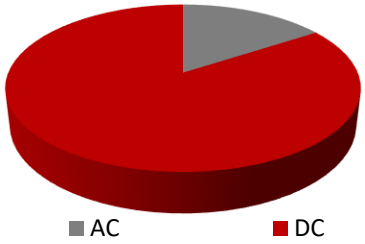
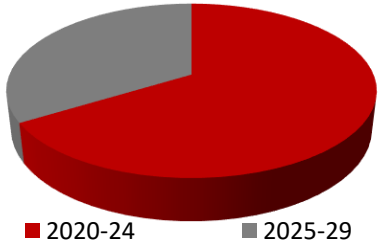


Figure 22: Demand for cables by time period during 2020–29 (%)



Overhead conductors — Tonnage

Expected demand for overhead conductors (by tonnage)

Table 12: Estimated demand for overhead conductors during 2020–29 (tonnes)

Voltage	Overhead conductors (tonnes)		
	2020–24	2025–29	2020–29
100–154 kV	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX
220–280 kV	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX
330–400 kV	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX
500/600 kV	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX
700–750 kV	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX
—AC	XXXX	XXXX	XXXX
—DC	XXXX	XXXX	XXXX

Note: AC – alternating current; DC – direct current
Source: Global Transmission Research

- In terms of weight, the demand for overhead conductors is estimated to be around XXXX tonnes for the period between 2020 and 2029. The average annual requirement during the period is XXXX tonnes.

Figure 14: Demand for conductor tonnage by voltage during 2020–29 (%)

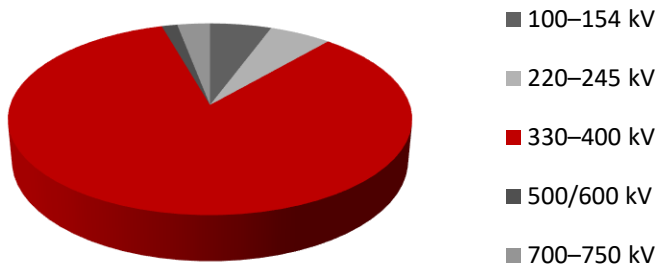


Figure 15: Demand for conductor tonnage by time period during 2020–29 (%)

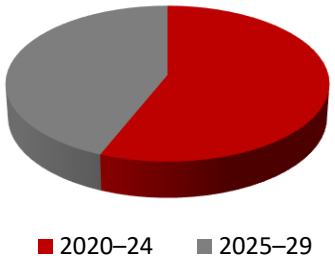
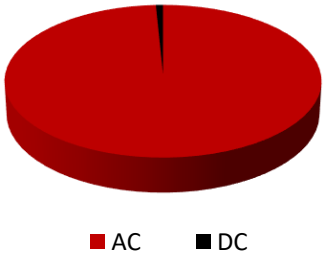


Figure 16: Demand for conductor tonnage by technology during 2020–29 (%)



Overhead conductors — Market Size

Expected market size for overhead conductors (USD million)

- The market size for transmission towers is estimated to be around USD XXXX million for the period between 2020 and 2029. XX% of the demand arise during 2020–24 period. The 330-450 kV segment accounted for the largest market share during the period 2020–29.

Table 13: Estimated market for overhead conductors during 2020–29 (USD million)

Voltage	Overhead conductors market (USD million)		
	2020–24	2025–29	2020–29
100–154 kV	XXXX	XXXX	XXXX
220–280 kV	XXXX	XXXX	XXXX
330–450 kV	XXXX	XXXX	XXXX
500/600 kV	XXXX	XXXX	XXXX
700–750 kV	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX

Source: Global Transmission Research

Figure 17: Market size for overhead conductors by voltage during 2020–29 (USD million)

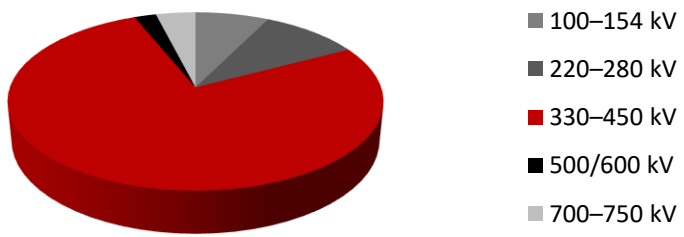
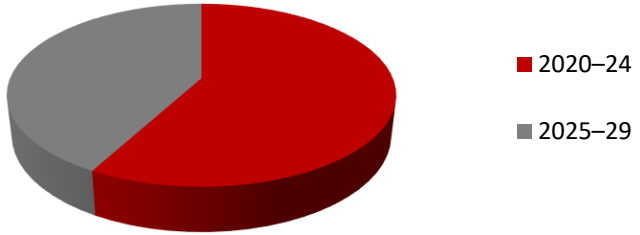


Figure 18: Market size for overhead conductors by time period during 2020–29 (USD million)



Note: The cost variation is based only on the voltage range and not other parameters such as terrain difficulty, rating, or other asset characteristic.
Market size represents the estimated revenues expected to be generated from sale of overhead conductors based on demand.
Source: Global Transmission Research

Pricing and costing trends

LCC comparison between AIS and GIS

- The cost comparision of AIS and GIS switchgear is based on the total life cycle cost of the equipment as inital investment is not sufficient to analyse the overall economics of the substation projects.
- While the primary hardware components cost is substantially more for a GIS in comparision to an AIS, the total life cycle cost (LCC) of a GIS is significanlly lesser than an AIS due to lower costs associated with maintenance, outage, real estate, electrical assembly and erection. costs, and other costs.
- GIS has siginificant advantages over AIS in terms of reduced size, safety, reliability, maintenance, lower weight, etc.
- GIS finds major application in densely populated centers of industrialised areas. In major cities where real estate prices are high, and at higher voltage ranges GIS is an preffered option in comparison with AIS. However, the cost of GIS and AIS are specfic to each project and utilities make decision om case to case basis.
- With the rising urbanisation, the need for reliablity and safety measures require use of switchgear technologies such as GIS.
- The prices of the switcgear depends on the raw material costs, custom-build nature of the product and the terms of the contract.

Figure 1: Cost distribution of components in AIS and GIS switchgear

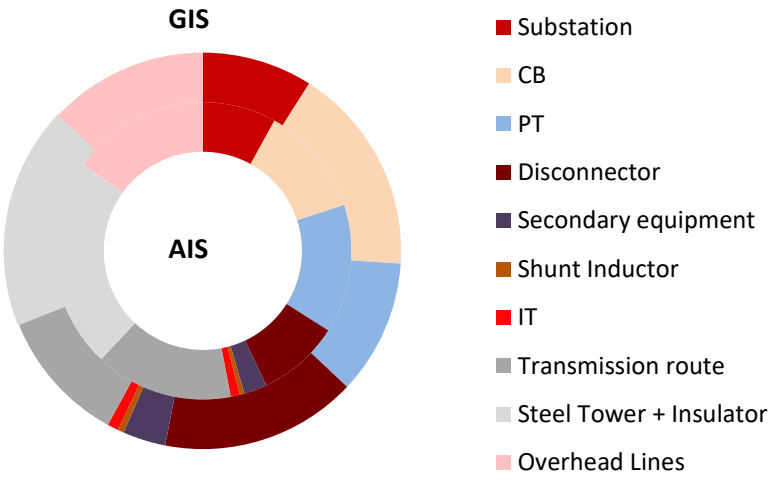


Table 1: LCC evaluation of AIS and GIS

Life cycle cost	AIS	GIS
Planning & engineering	XXXX	XXXX
Real estate	XXXX	XXXX
Primary equipment	XXXX	XXXX
Secondary equipment	XXXX	XXXX
Earthwork, civil work, structures	XXXX	XXXX
Electrical assembly and erection	XXXX	XXXX
Maintenance	XXXX	XXXX
Outage	XXXX	XXXX
LCC after 10 years	XXXX	XXXX

Source: Research papers, primary expert interviews, and Global Transmission Research analysis

Reactors — Units

Table 25: Expected demand for reactors during 2020–29 (number)

Voltage	Line reactors			Bus reactors			Total reactors		
	2020-24	2025-29	2020-29	2020-24	2025-29	2020-29	2020-24	2025-29	2020-29
330–400 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
500 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
750/765 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
1,000/1,200 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Source: Global Transmission Research

- Around XXXX reactors will be required to absorb the reactive power generated by planned 330 kV and above transmission lines during 2020–29.
- About XX% of the total reactors will be needed at 330-400 kV level.

Figure 36: Demand for reactors by voltage during 2020-29 (%)

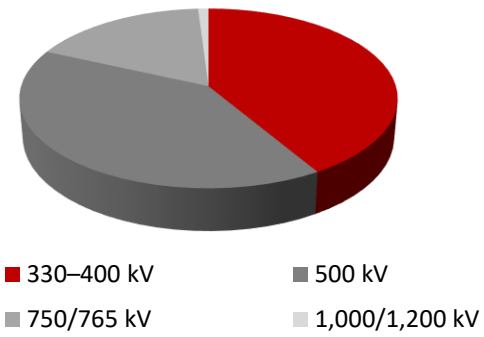
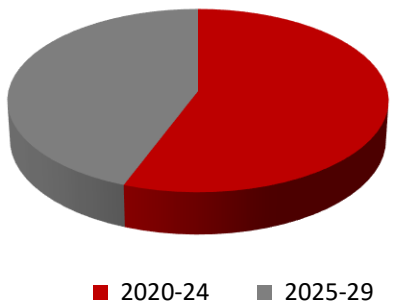


Figure 37: Demand for reactors by time period during 2020-29 (%)



Reactors — Market size

Expected market size for reactors (USD million)

- The market size for reactors is estimated to be around USDXXXX million for the period between 2020 and 2029. XX% of the demand arise during 2020-24 period. The 500 kV segment is expected to be the largest accounting for USD XXXX million during the forecast period.

Table 26: Expected market for reactors during 2020–29 (USD million)

Voltage	Reactor market (USD million)		
	2020–24	2025–29	2020–29
330/400 kV	XXXX	XXXX	XXXX
500 kV	XXXX	XXXX	XXXX
750 kV	XXXX	XXXX	XXXX
1,000 kV	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX

Figure 38: Market size for reactors by voltage during 2020–29 (USD million)

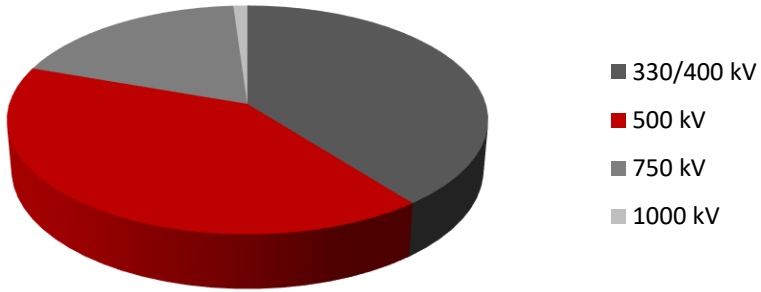
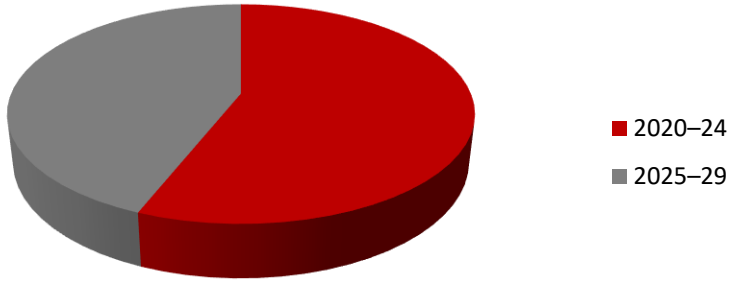


Figure 39: Market size for reactors by time period during 2020–29 (USD million)



Note: Market size represents the estimated revenues expected to be generated from sale of reactors based on demand.
Source: Global Transmission Research

Expected demand for high voltage power transformers

Expected demand for high voltage power transformers (number)

Table 9: Estimated demand for high voltage power transformers during 2020–27 (number)

Voltage	Number of power transformers		
	2020–23	2024–27	2020–27
132 kV	XXXX	XXXX	XXXX
220 kV	XXXX	XXXX	XXXX
400 kV	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX

Source: Global Transmission Research

- During the 8-year period between 2020 and 2027, an estimated XXXX high voltage power transformers will be required in Kenya at 132 kV and above voltage levels to support the upcoming substations.
- Of the total transformer demand, over XX% will be needed to set up 220 kV substations in the country, XX% for 400 kV substations and the rest for 132 kV substations.
- Period-wise, about XX% of the total transformer demand will originate during the first half of eight years period 2020-27, i.e., in 2020–23 and rest during the latter half.

Figure 20: Demand for power transformers by voltage during 2020–27 (%)

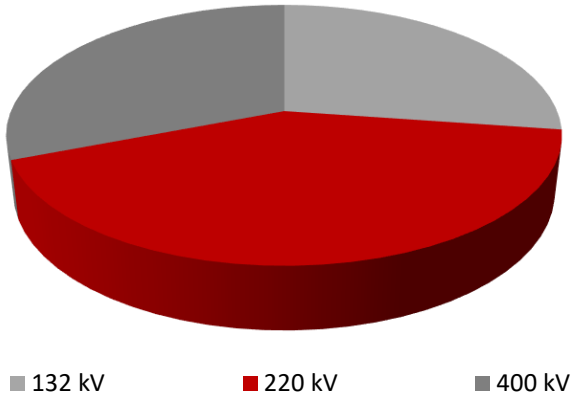
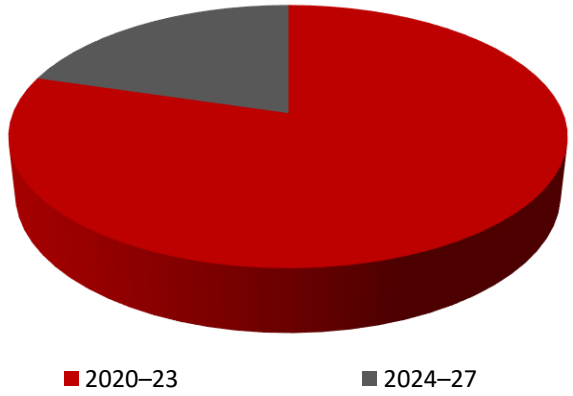


Figure 21: Demand for power transformers by time period during 2020–27 (%)



Expected demand for switchgear equipment (1/2)

Expected demand for switchgear equipment (number)

Table 10: Estimated demand for switchgears during 2020–27 (number)

Voltage	2020–23	2023–27	2020–27
132 kV	XXXX	XXXX	XXXX
220 kV	XXXX	XXXX	XXXX
400 kV	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX

Source: Global Transmission Research

- In Kenya, it has been estimated that around XXXX new substations will be set up during the ten-year period between 2020 and 2027 at 132 kV and above voltage levels. These substations will require at least XXXX new switchgears.
- It is estimated that XXXX bays will be installed in the country during this period.
- A total of XXXX circuit breakers, XXXX isolators, XXXX lightning arrestors and XXXX wave traps will need to be installed during this period to help set up the planned substations and bays.

Table 11: Expected demand for switchgear equipment during 2020–27 (number)

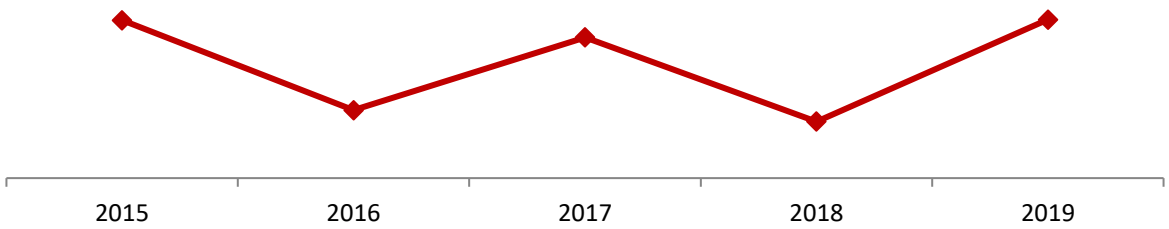
Voltage	Circuit breakers			Isolators			Lightning arrestors			Wave traps		
	2020–23	2024–27	2020–27	2020–23	2024–27	2020–27	2020–23	2024–27	2020–27	2020–23	2024–27	2020–27
132 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
220 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
400 kV	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Total	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Note: Does not include high voltage direct current switchgear equipment
Source: Global Transmission Research

7.2.22 Nexans S.A. (1/3)

Key information	
Description	• Nexans S.A., headquartered in Paris, France, is one of the leading manufacturers of cables in the world. It has an extensive range of cables and cabling solutions for power transmission and distribution (submarine and land), energy resources (oil and gas, mining and renewables), transportation (road, rail, air, and sea) and building (commercial, residential and data centers). • In the electricity transmission segment, Nexans manufactures medium- and high-voltage cables for both land and submarine applications. • It manufactures AC and DC underground cables of up to 500 kV voltage. It also manufactures 3-core XLPE submarine AC cables from 60 kV to 225 kV, and single-core XLPE submarine AC cables up to 400 kV voltage levels.
Key business divisions	Infrastructure, Industry and Building
Transmission product offerings	Aerial bundled conductors; cable connectors for transformers; control, instrumentation and coaxial cables; underground and submarine cables; OHL monitoring systems; superconducting cable systems and fault current limiters; dynamic line rating solutions; power line communication (PLC), etc.
Manufacturing facilities	Sites located in 34 countries
Employees	26,000
Headquarters	Paris, France

Trend in total sales (EUR million)



Note: The data is based on constant metal price.
Source: Nexans S.A.

7.2.22 Nexans S.A. (2/3)

Recent developments	
New products and related developments	• In 2020, Nexans secured a French State backed EUR280 million term loan facility, issued by a pool of French banks. The loan has an extension option up to five years and a twelve-month maturity; and is guaranteed by the French government at 80 per cent. Nexans had reported that it has sufficient liquidity for operations and foresees financial commitments without debt repayment before 2021. The Crédit Agricole Corporate and Investment Bank (CIB) acted as the agent; Banque Nationale de Paris (BNP) Paribas was the coordinator; and Crédit Industriel et Commercial (CIC), Crédit Agricole Ile de France, Natixis and Société Générale are the the lending banks. • In 2019, Nexans signed a framework agreement with Eversource and Orsted, for supply of up to 1,000 km of export cable for Orsted's offshore wind projects in the US, till 2027. • In 2018, the company started developing a novel 320 kV extruded cable to be deployed as the power export cables for the DolWin 6 offshore wind farm in the German North Sea.
Mergers and acquisitions (M&A) and partnerships	• In 2020, Nexans announced execution of an agreement to sell Berk-Tek (a leading U.S-based manufacturer of network cables) to Leviton (US-based electric wire company) for USD202 million. • In January 2018, the company acquired controlling interest in BE CableCon, the Denmark-based manufacturer and supplier of cable kits for wind turbine companies. • In July 2017, the company took hold of 100% shares of the Nippon High Voltage Cable Corporation. • In 2016, Nexans SA announced partnership with American Superconductor (AMSC) to develop and market/sell AMSC's Resilient Electric Grid (REG) system and superconductor power cables, in the US and Canada.

Source: Nexans; Global Transmission Research

Key transmission product offerings of Nexans

Segment	Product description
Overhead electricity network segment	• Nexans manufactures high-capacity conductors that can withstand temperatures up to 250 degrees Celsius. Products in this category include aluminium conductor steel supported (ACSS) and aluminium alloy conductors having composite cores under the trademark High Capacity Lo-Sag. • Nexans also manufactures conventional conductors capable of withstanding temperatures up to 90 degrees Celsius. These include aluminium conductor steel reinforced (ACSR), aluminium conductor aluminum reinforced (ACAR), and all aluminium alloy conductors (AAAC).
Cable segment	• It manufactures AC and DC underground cables of up to 500 kV voltage levels. • It also manufactures 3-core XLPE submarine AC cables from 60 kV to 225 kV, and single-core XLPE submarine AC cables of up to 400 kV.

Source: Nexans; Global Transmission Research

7.2.22 Nexans S.A. (3/3)

	Key contact
Chief Executive Officer	Christopher Guérin
Address	8, rue du Général Foy, Paris, Ile-de-France, 75008, France
Phone	+33 01 78150541
Fax	NA
Website	www.nexans.com