Assessment of cables, conductors industries and investments in power sector in India

August 2026

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1.1 Global macroeconomic overview

1.2 Global GDP is projected to grow by 3.1% in 2026 and 3.2% in 2027

The April 2026 update to IMF's World Economic Outlook (WEO) report employs a scenario-based approach to present the forecast for 2026 and 2027. In this approach, the scenario in which the ongoing conflict in the Middle East has limited duration, intensity, and scope so that the disruptions stemming from it dissipate by mid-2026 is assumed for modelling a 'reference forecast' based on which forecasts are drawn for adverse and severe scenarios in which the conflict becomes more protracted, or the resumption of production and transport activities takes longer because of possible scaring from closing of or damage to energy infrastructure. Hence, the impact on global economy which crucially depends on the conflict's duration, intensity, and scope is projected as shown below:

Scenario-based forecast approach taken by IMF*

	Reference forecast	Adverse forecast	Severe forecast
Growth projection for global real GDP	3.1% in 2026 3.2% in 2027	2.5% in 2026 3.0% in 2027	2.0% in 2026 2.2% in 2027
Growth projection for global inflation	4.4% in 2026 3.7% in 2027	5.4% in 2026 3.9% in 2027	5.8% in 2026 6.1% in 2027

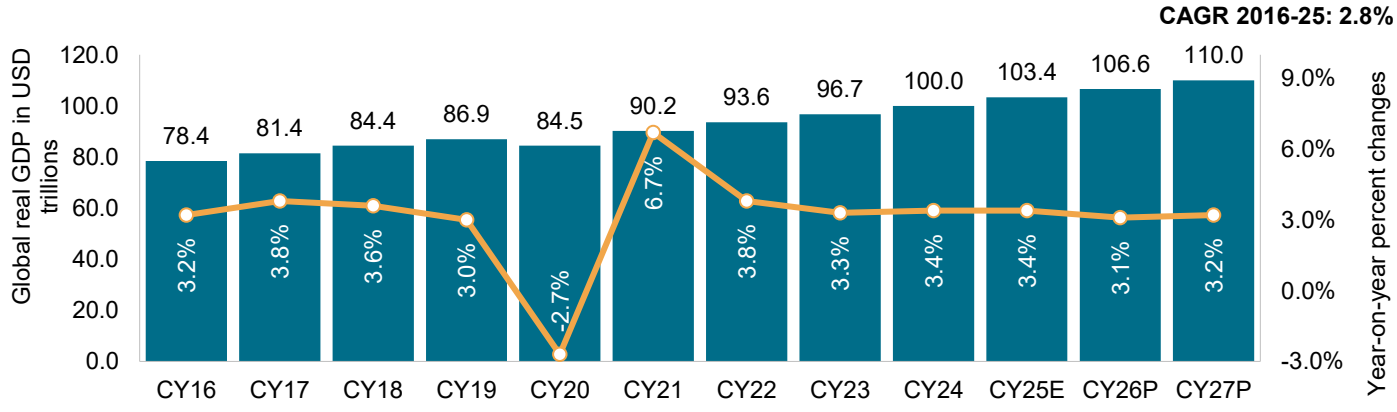
Note: At the time of publication, reference scenario was the most likely outcome given the conditions observed at the time, whereas adverse scenario was the less likely outcome based on the assumption that the disruptions caused by the Middle East conflict would dissipate by mid-2026 which did not happen. Given the latest developments, severe scenario is most likely to play out.

**The IMF data is based on calendar year*

Source: IMF's World Economic Outlook - April 2026 update, Crisil Intelligence

As per IMF, most of the impact on growth in 2026 comes from higher energy prices, whereas most of the impact on growth in 2027 comes from tightening financial conditions and rise in inflation expectations.

Global real GDP trend and outlook, CY15-27



Note: E: Estimated, P: Projection

Source: IMF, World Economic Outlook Update, April 2026; Crisil Intelligence

The forecast largely reflects the disruptions from the Middle East conflict, partly offset by reduced tariff rates, preexisting policy support, and stronger-than-expected outturn at the end of 2025 and the first quarter of 2026. However, significant variation is expected across countries, with lower-income net energy-importing economies being hit particularly hard through higher energy prices and foreign exchange depreciation. Impact is greater on emerging economies because of a combination of a larger exposure to higher commodity prices and disruption to energy production, a larger increase in inflation expectations, and a more pronounced tightening in financial conditions.

Risks to the outlook remain tilted on the downside on account of escalation of geopolitical tensions, flaring up of trade-related disputes, reevaluation of profit expectations regarding AI potentially leading to decline in investments and an abrupt correction in financial markets, and larger fiscal deficits and increasing public debt which could put pressure on long-term interest rates.

On the upside, economic activity could be further lifted by AI-related investment and supported by renewed momentum for structural reforms and by a sustained easing in trade tensions.

1.3 India's GDP to grow by 6.6% in FY27

In February 2026, the Ministry of Statistics and Programmer Implementation (MoSPI) released a new series of national accounts estimates with base year of FY 2022-23 as it represents a recent normal year (after COVID). This base revision was undertaken to capture structural changes that have taken place in India's economy and to leverage the availability of comprehensive data on different sectors of the economy. So, the new series not only improves estimation methods but also incorporates the latest data sources, thereby enhancing both the coverage and the accuracy of national accounts.

Under the new 2022-23 series, India's real GDP grew from Rs 261.2 trillion in FY23 to Rs 323.1 trillion in FY26, logging a CAGR of 7.4% between FY23 and FY26. Further, as per Provisional Estimates (PE) of the National Statistics Office (NSO), India's real GDP grew at 7.7% in FY26. Major drivers of this growth have been the secondary and tertiary sectors as they registered growths of 8.8% and 9.3%, respectively. 'Manufacturing', 'Trade, Repair, Hotels, Transport, Communication & Services related to Broadcasting, Storage' and 'Financial, Real Estate & Professional Services' sectors attained double-digit growth at both constant and current prices in FY26.

Crisil's initial forecast for FY27 considered three scenarios among which the base scenario predicated that India's GDP would grow at 7.1% in FY27. But, since the conflict in West Asia has extended beyond 2 months, the downside risks to India's economy have begun materializing. So, Crisil has laid out the following macroscopic outlook for FY 27.

Crisil's projection for India for FY 2027

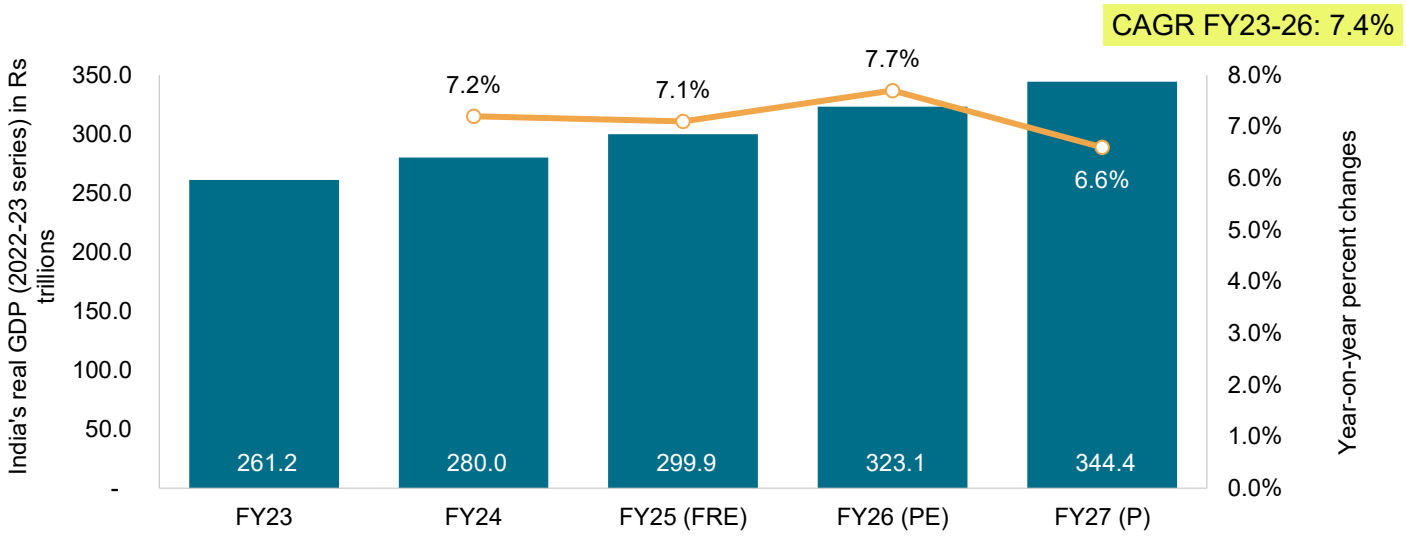
Macroeconomic variables	Forecast for FY27
Real GDP growth	6.6%
CPI inflation	5.1%
10-year government security (G-sec) yield (March average	7.0%
Current account balance (% of GDP)	-2.2%
Exchange rate (March average, Rs/$)	93.5

Source: Crisil Intelligence

India's economy has deep linkages to West Asia through trade, and investments, and remittances. 45-50% of crude oil imported by India and 65% of LNG imported by India comes from West Asia. For India, West Asia is also a crucial supplier of petroleum products, fertilisers and industrial raw materials, whereas, for West Asia, India is a supplier of engineering goods, gems and jewellery, food products, chemicals, and construction materials, which together make up 13% of India's total goods exports. Apart from that, West Asia also accounts for ~8% of India's FDI inflows. Additionally, the Gulf Cooperation Council (GCC) region also employs more 9.3 million Indias who together contribute ~38% of the total remittances received by India.

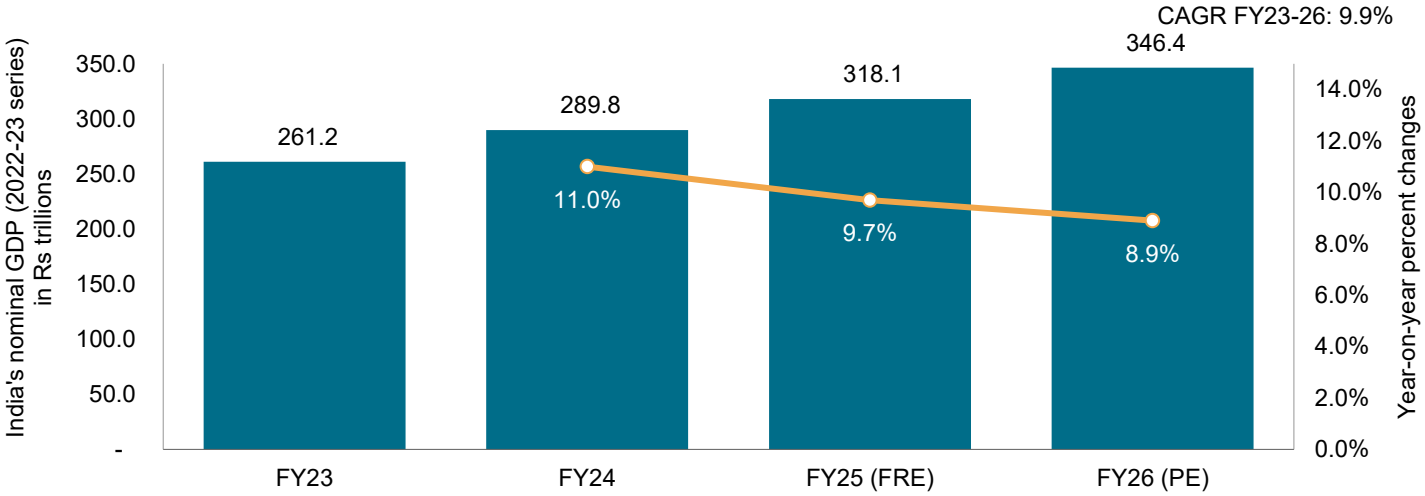
In addition to direct impact of the ongoing conflict in West Asia, India is also getting affected by global supply chain disruptions, surges in freight and insurance costs, weakening global demand for exports, sub-normal monsoons led by El Niño, and high dependence of its manufacturing sector on imported inputs.

India real GDP growth at constant prices (new series)



Note: FRE: First Revised Estimates, PE: Provisional Estimates, P: Projection
Source: Ministry of Statistics & Programmer Implementation, Crisil Intelligence

India's nominal GDP (2022-23 series) trend, FY23-26



Note: FRE: First Revised Estimates, PE: Provisional Estimates
Source: Ministry of Statistics & Programmer Implementation, Crisil Intelligence

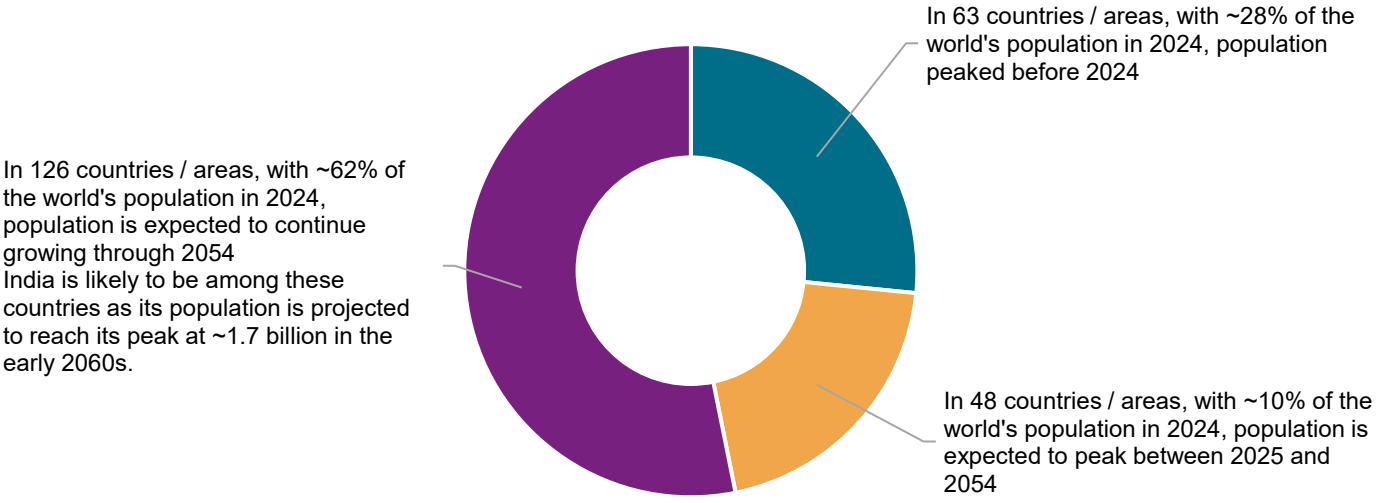
1.4 Factors Supporting India's Growth:

1.5 India has the potential to reap demographic dividends

As per World Population Prospects 2024 (WPP 2024), published in July 2024 by the United Nations, India's population grew from 1.1 billion in 2001 to ~1.4 billion in 2023, thereby registering a CAGR of ~1.4% between 2001 and 2023. Going forward, India's population is projected to expand at a CAGR of 0.8% between 2025 and 2030, and is expected to remain the world's largest throughout the century

In addition to the above, the WPP 2024 reports that in 2024, one in every four people lived in a country that has already peaked in size. To elaborate, the following chart illustrates where different groups of countries stand with respect to their population's peak size.

Distribution of countries/ areas based on their peak population size

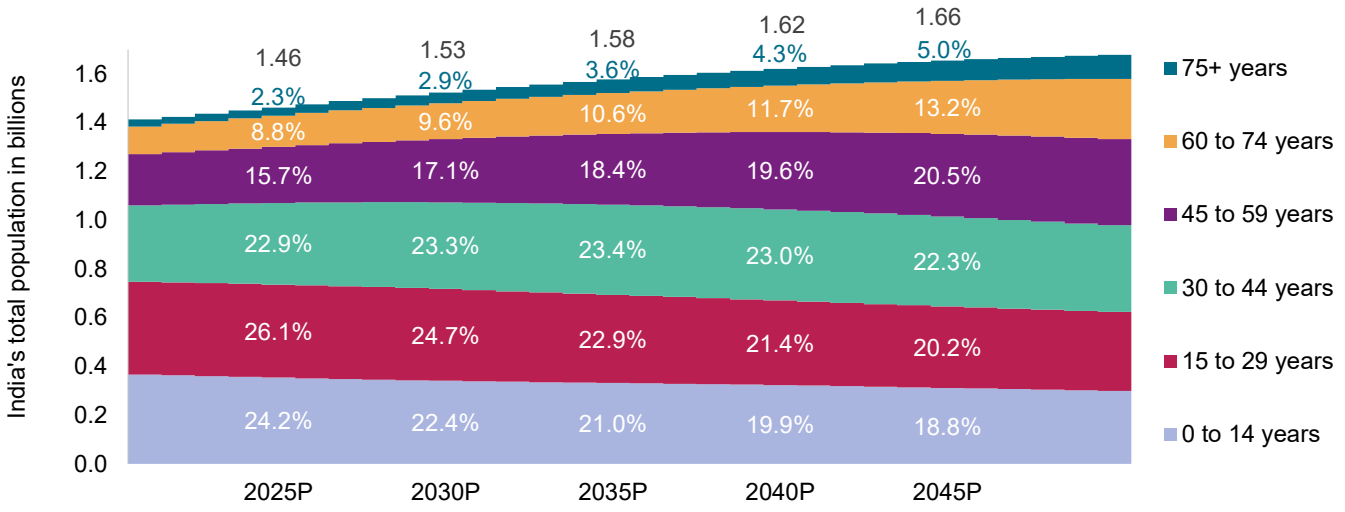


Source: United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects 2024

Further, the WPP 2024 notes that there are ~100 countries / areas with youthful populations and declining fertility where the working-age population will grow through 2054, resulting in a time-bound window of opportunity for them to leverage their growing shares of working-age population (i.e. population between ages 20 and 64 years) for accelerated economic growth. In other words, there are about 100 countries / areas in the world that may reap demographic dividends. Notably, India is one of them.

In 2023, India's working-age population stood at 849.9 million commanding a share of 59.1% in its total population. This working-age population is expected to reach its peak when it touches the 967.7 million-mark in 2034 commanding a share of ~69.2% in India's total population. This implies that, India has a multi-decade window of opportunity for embarking on a path of accelerated economic growth.

India's population: split by age-groups, CY 2025-2045P



Note: P: Projected

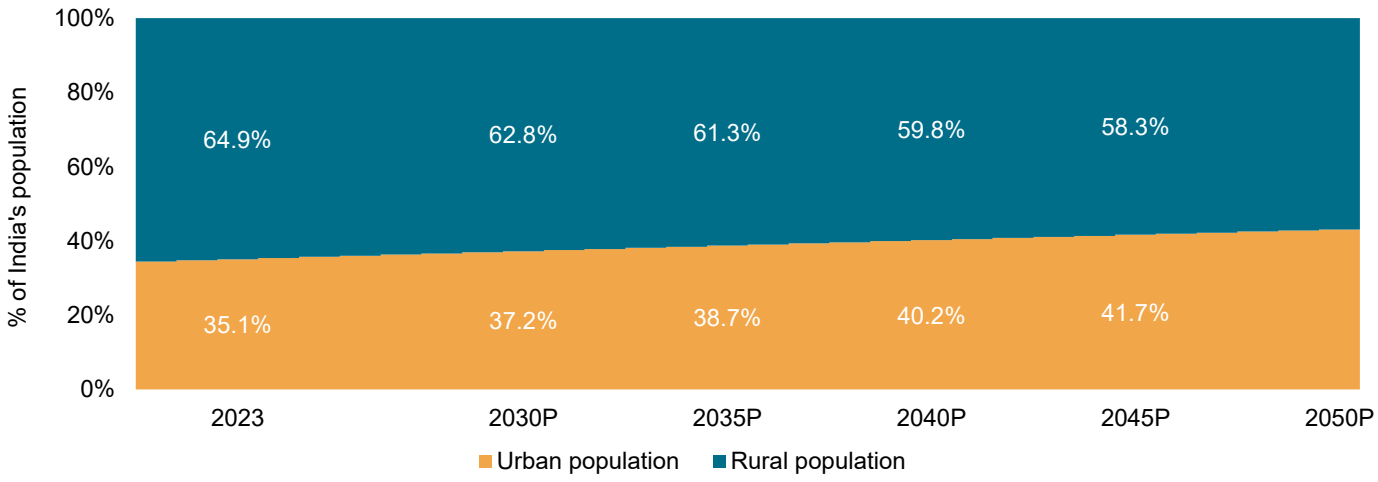
Source: United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects 2024

1.6 India's population is turning increasingly urban

India's urban population has been consistently increasing, and the trend is expected to continue as India's economy grows. People from rural areas move to cities for better education, job opportunities, and quality of life. This internal migration may involve the relocation of an entire family or the relocation of a family's earning members or students.

In 2001, India's urban population made up 27.9% of its total population at an estimated 300.8 million. As per WPP 2024, India's urban population is likely to grow to 567.7 million by 2030, making up 37.2% of India's total population. This trend highlights the need to expand infrastructure and provision of basic services in urban areas to accommodate its growing population.

India's population: split by region, 2023-2045P



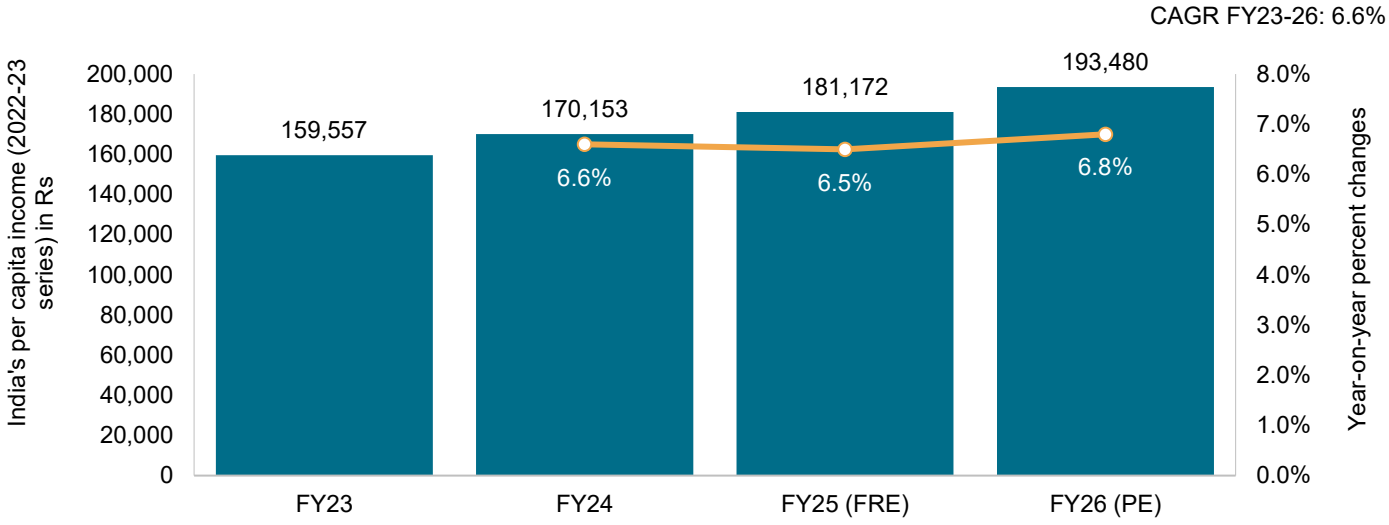
Note: P: Projection

Source: United Nations, Department of Economic and Social Affairs, Population Division. World Urbanization Prospects 2025

India’s per capita income grew by 6.6% in FY23-26

India’s per capita income, a broad indicator of living standards, grew at a CAGR of 6.6% between FY23 and FY26, from Rs 1,59,557 in FY23 to Rs 193,480 in FY26. Growth was led by better job opportunities, propped up by overall GDP growth.

India's per capita income at constant prices (2022-23 series), FY23-26

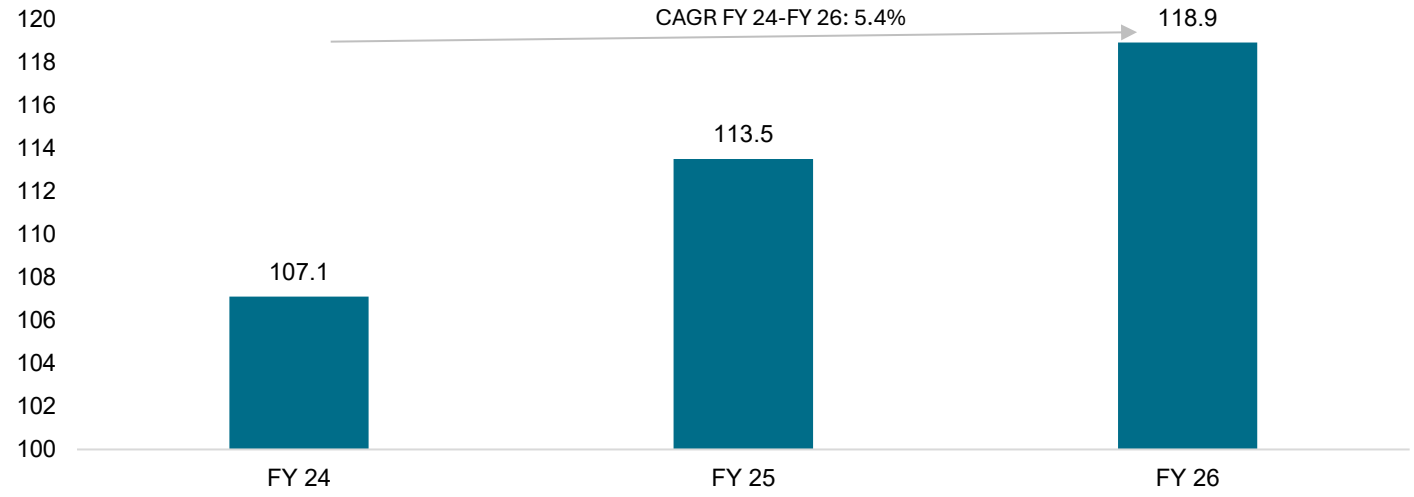


Notes: FRE: Final Revised Estimates, PE: Provisional Estimates
Source: Ministry of Statistics & Programme Implementation

Manufacturing IIP increased to 118.9 in FY26

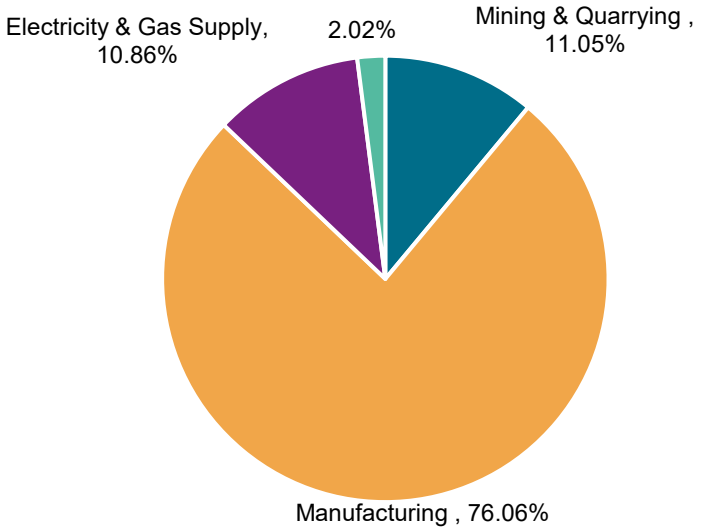
India's manufacturing activity has exhibited a steady upward trend, with the Manufacturing Index of Industrial Production (IIP) increasing from 107.1 in FY24 to 113.5 in FY25 and further to 118.9 in FY26. The revised IIP series (base year: 2022–23) also underscores the significance of the manufacturing sector, which accounts for 76.06% of the overall index, followed by mining and quarrying (11.05%), electricity and gas supply (10.86%), and water supply, sewerage and waste management (2.02%). The high weightage of manufacturing in the IIP highlights its role in driving industrial output, while the gradual increase in the index reflects sustained manufacturing activity supported by policy initiatives, capacity expansion, and continued investments across key industries.

Manufacturing IIP



Source: MOSPI, Crisil Intelligence

Weight of in IIP (FY26)

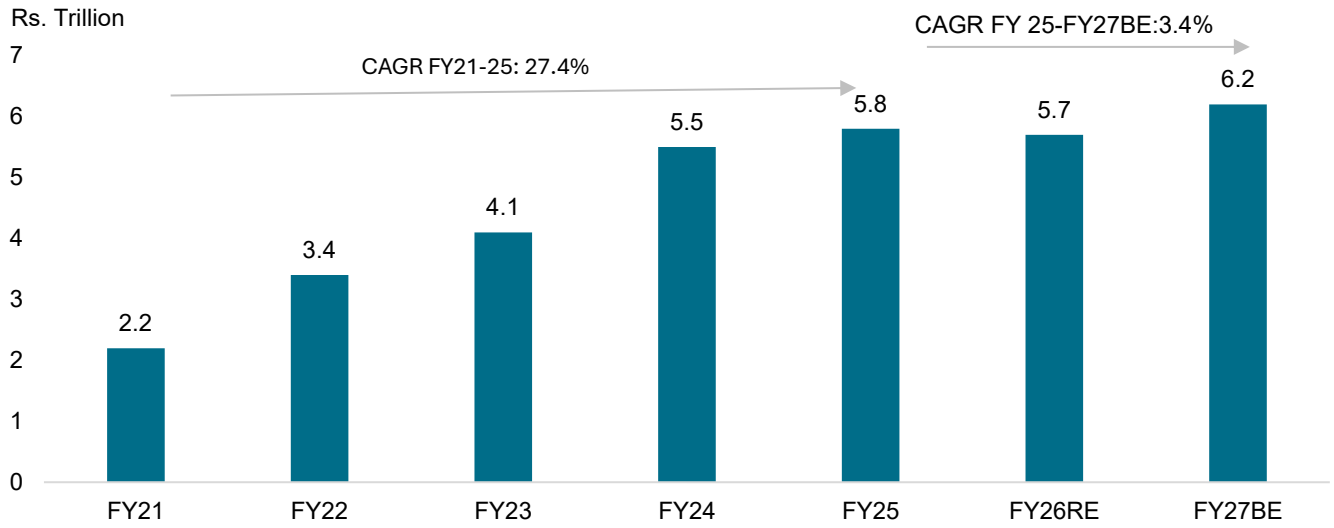


*Note: *entire new sector has been added in the new IIP series with base 2022-23*
Source: MOSPI, Crisil Intelligence

Central Budget allocation

Central government budgeted allocation to core infrastructure ministries witnesses marginal improvement, highlighting the government's continued emphasis on infrastructure-led growth. Furthermore, reflects a stronger commitment to expanding connectivity, improving public infrastructure, enhancing energy security, and supporting sustainable economic development across the country

Central government budgeted allocation to core infrastructure ministries



Note: RE Revised Estimates, BE: Budget Estimates

Figure indicated the Gross Budgetary Support (GBS) to core infrastructure ministries including Ministries of Road & Highways, Railway, Housing & Urban infrastructure, Shipping, Atomic energy, Civil Aviation, Power, New & Renewable energy, Water Resources and Rural development

Source: Budget Documents, Crisil Intelligence

Key government initiatives to boost infrastructure & manufacturing segment

Growth driver	Description and reasoning
National Infrastructure Pipeline (NIP)	The National Infrastructure Pipeline (NIP) has expanded significantly since its launch in 2019, growing from about 6,800 projects worth ₹111 trillion to nearly 14,563 projects with an investment value of ₹213 trillion by March 2026. Although project additions slowed to 1,563 in FY2026, the associated investment remained substantial at ₹28.4 trillion, indicating a growing focus on larger and more capital-intensive projects. Covering 33 sectors and 79 sub-sectors, the NIP has evolved into a comprehensive infrastructure planning framework that enhances project visibility and investor confidence. The pipeline continues to prioritize logistics, energy transition, and urban infrastructure; however, the pace of infrastructure development is increasingly influenced by execution capabilities rather than project identification, making implementation efficiency the key determinant of future progress.
National Monetisation Pipeline (NMP) 2.0	National Monetisation Pipeline (NMP) 2.0, targets asset monetisation worth ₹16.72 lakh crore during FY 2026–30, including ₹5.8 lakh crore of private investment, to support the Viksit Bharat infrastructure agenda. Building on the success of NMP 1.0, the programme aims to unlock value from existing public infrastructure assets, recycle capital for new projects, and accelerate infrastructure development across sectors such as highways, railways, power, airports, ports, telecom, mining, and tourism
PM Gati Shakti	Prime Minister launched PM Gati Shakti - National Master Plan for Multi-modal Connectivity, essentially a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects. It will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, Agri zones will be covered, and technology will be leveraged including spatial planning tools with ISRO (Indian Space Research Organisation) imagery developed by BiSAG-N (Bhaskaracharya National Institute for Space Applications and Geoinformatics).

Growth driver	Description and reasoning
	This multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another. It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.
Production linked incentive (PLI) scheme	The PLI Scheme has emerged as a key driver of India's manufacturing growth, with 836 approved projects across 14 sectors and a total incentive outlay of Rs 1.91 trillion. As of December 2025, it had attracted over Rs 2.16 trillion in investments, generated Rs 20.41 trillion in production and sales, and enabled Rs 8.3 trillion in exports. The scheme has also created more than 1.439 million jobs while disbursing approximately Rs 0.29 trillion in incentives, highlighting its strong contribution to investment, capacity expansion, exports, and employment generation.
Central capital expenditure	Government-led capital expenditure continues to be a key driver of growth in India's capital goods sector. Public capital outlay has increased nearly 4.2 times, from Rs 2.63 trillion in FY18 to Rs 11.21 trillion in FY26 (BE) and is further budgeted at Rs 12.2 trillion in FY27, reflecting the government's sustained focus on infrastructure creation and industrial development. Rising investments in transportation, energy, logistics, urban infrastructure, and manufacturing are expected to drive demand for machinery and equipment, supporting capacity expansion across the capital goods value chain.

Source: Budget Documents, Crisil Intelligence

1.7 Power Consumption

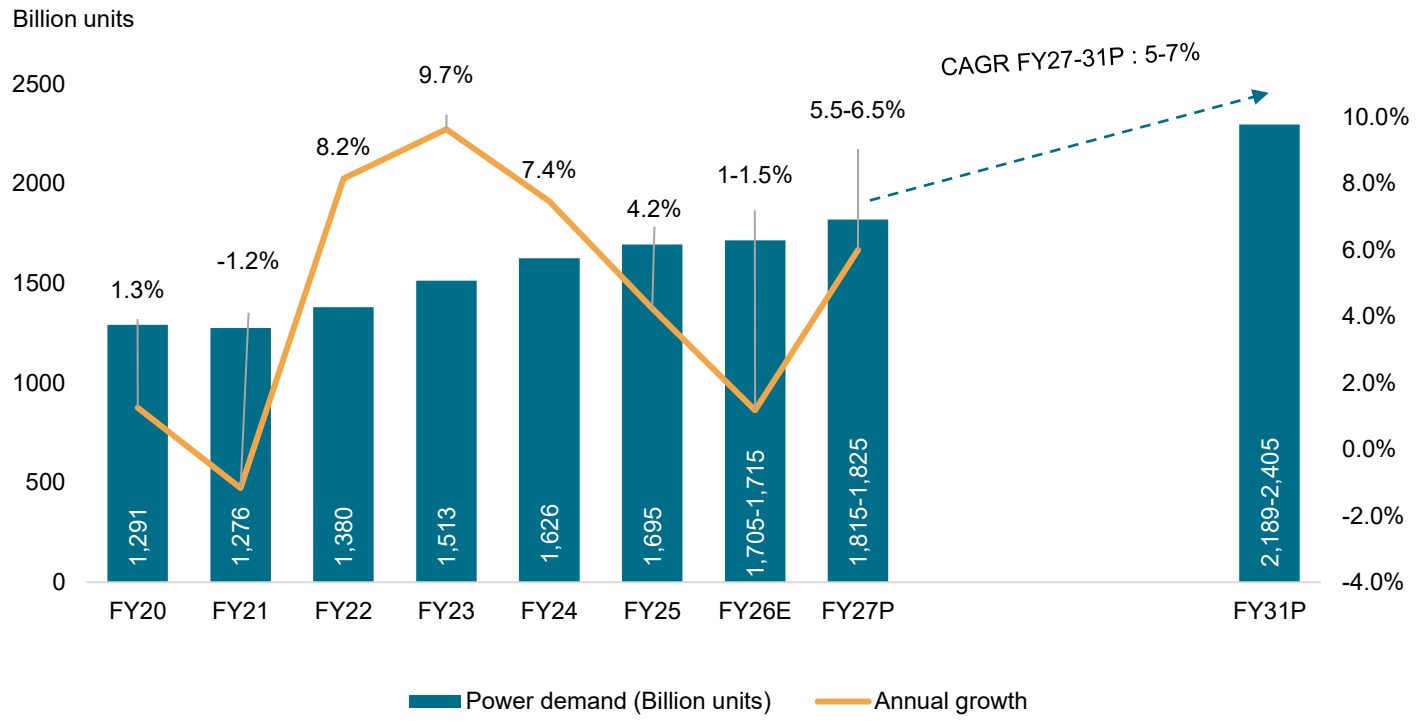
Power demand to maintain healthy momentum slated to grow at 5-7% CAGR over FY27-31

India's electricity demand has been rising steadily, with a CAGR of ~6% between FY20 and FY24. In FY24, power demand demonstrated consistent growth of 7.4% driven by El-Nino. The country's power demand had surged in the first quarter of FY23 due to a severe heatwave and continued economic activity, resulting in a 9.7% year-on-year growth from FY22 despite a high base.

The Indian power sector is undergoing significant transformation, supported by Government initiatives and investments aimed at strengthening grid infrastructure, expanding renewable energy capacity and improving electricity access. Growth drivers such as the PM Surya Ghar: Muft Bijli Yojana, expansion of electric vehicle charging infrastructure, metro rail projects, smart city initiatives, the Revamped Distribution Sector Scheme ("RDSS"), data centre development and large-scale renewable energy projects, including the Khavda Renewable Energy Park, are expected to contribute to sustained demand for power transmission and distribution products. These investments are expected to require significant deployment of conductors, power cables and related transmission infrastructure

In fiscal 2026, power demand is estimated to witness 1-1.5% growth year-over-year basis, reaching to 1,705-1,715 BU. This growth comes on the back of three consecutive high growth years starting fiscal 2022 leading to an addition of 315 BU over the period. Crisil Intelligence estimates power demand to rise by 5.5-6.5% on year in fiscal 2027 to 1,815-1,825 BU. This is expected to come on the back of higher temperatures and lower rainfall due to the expected arrival of El-Nino, July 2026 onwards resulting in rise in cooling demand. Over the next few years, from FY27 to FY31, power demand is expected to maintain a CAGR of 5-7%, reaching 2,189-2,405 billion units. This growth will be supported by healthy economic expansion, improvements in distribution infrastructure, and major reforms initiated by the central government to enhance the overall health of the power sector.

Power demand growth (BU) (FY20-FY31P)



Note: E- Estimated, P- Projected
Source: CEA, Crisil Intelligence

The demand for electricity in India is expected to be driven by various sectors, including industrial, commercial, and domestic. The industrial and commercial sectors are expected to be the primary drivers of power demand, with significant investments in manufacturing, infrastructure development, and policies like the Production-Linked Incentive (PLI) scheme. The government's Atmanirbhar Bharat relief package, spending on infrastructure through the National Infrastructure Pipeline, and commissioning of dedicated freight corridors are also expected to foster power demand. Additionally, the expansion of the services industry, rapid urbanization, and increased farm income from agriculture-related reforms will contribute to the growth in power demand.

Demand for power transmission and distribution infrastructure is expected to remain strong across several international markets, driven by grid expansion initiatives, increasing electrification, renewable energy integration and investments in transmission network modernization.

The domestic sector is also expected to see a rise in electricity consumption due to improving living standards, increased air conditioning requirements, and government schemes like the Pradhan Mantri Sahaj Bijli Har Ghar Yojana, which has achieved universal household electrification. The scheme has helped electrify 28.6 million households, driving electricity demand and aiming to ensure 24x7 power supply to separate agriculture and non-agriculture feeders. Further, railway electrification, rapid transition to electric vehicles, increased urbanization, and industrialization, smart city projects, and upcoming metro projects are expected to provide impetus to power demand.

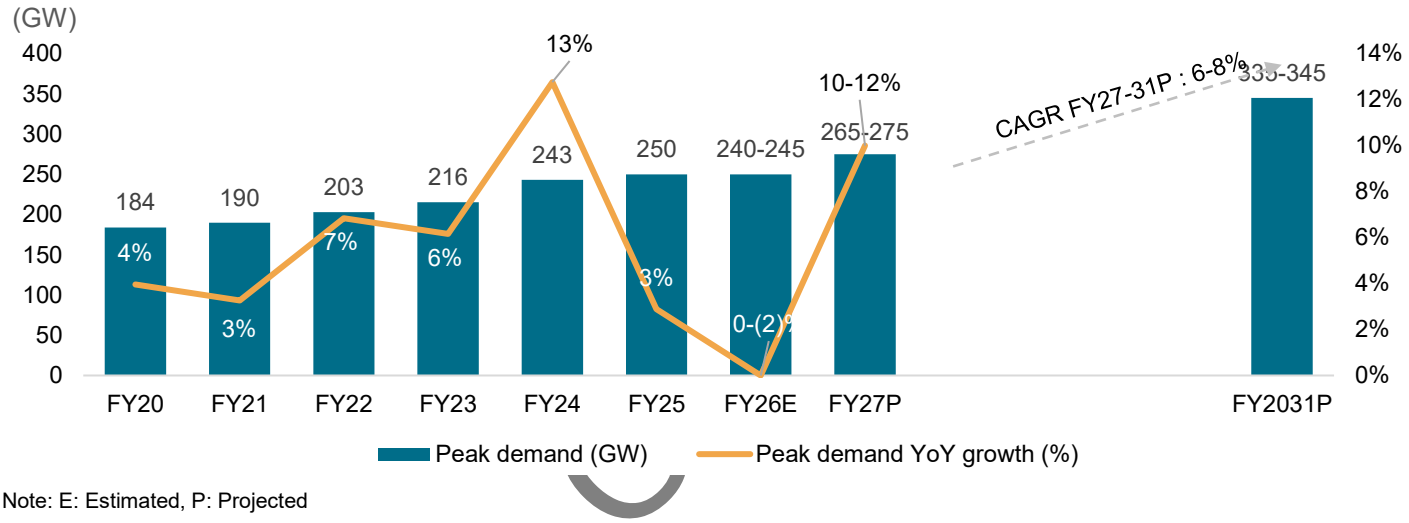
Additionally, India’s data centre build-out is emerging as a structural new driver of national electricity consumption. The government targets significant investments in the data centre and AI infrastructure with commitments from firms like TCS that plans to develop up to 1 GW of capacity over USD 6.5 billion in investments, Google plans to invest USD 15 billion in five years (2026-2030) to establish a comprehensive AI ecosystem in India, The Adani Group plans to invest USD 100 billion to develop renewable-energy-powered, hyperscale AI-ready data centres by 2035. Crisil Intelligence identifies rising

energy requirements for data centres, particularly those focused on AI and machine learning, as one of the key drivers of India's annual electricity demand growth.

Peak demand is expected to grow at annual average 6-8% over fiscal 2026-2031 to reach nearly 335-345 GW by fiscal 2031

Peak demand is the instantaneous surge in power requirement which occurs for a short duration. This may occur for instance when a large set of consumers utilize electricity simultaneously, such as in the evenings for lighting. Between fiscal 2019 and 2025, peak demand has grown from 177 GW to 250 GW. In January of fiscal 2026, peak power demand surged to 245 GW, surpassing the previous summer peak of 243 GW recorded in June 2025. This increase was primarily driven by heightened heating requirements during a severe cold wave in North India. Crisil Intelligence estimates peak power demand to remain steady in the range of 240-245 in fiscal 2026. Crisil Intelligence believes temperature will continue to remain a key monitorable going forward.

Peak demand growth (GW) (FY20-31P)



Note: E: Estimated, P: Projected

Source: CEA, Crisil Intelligence

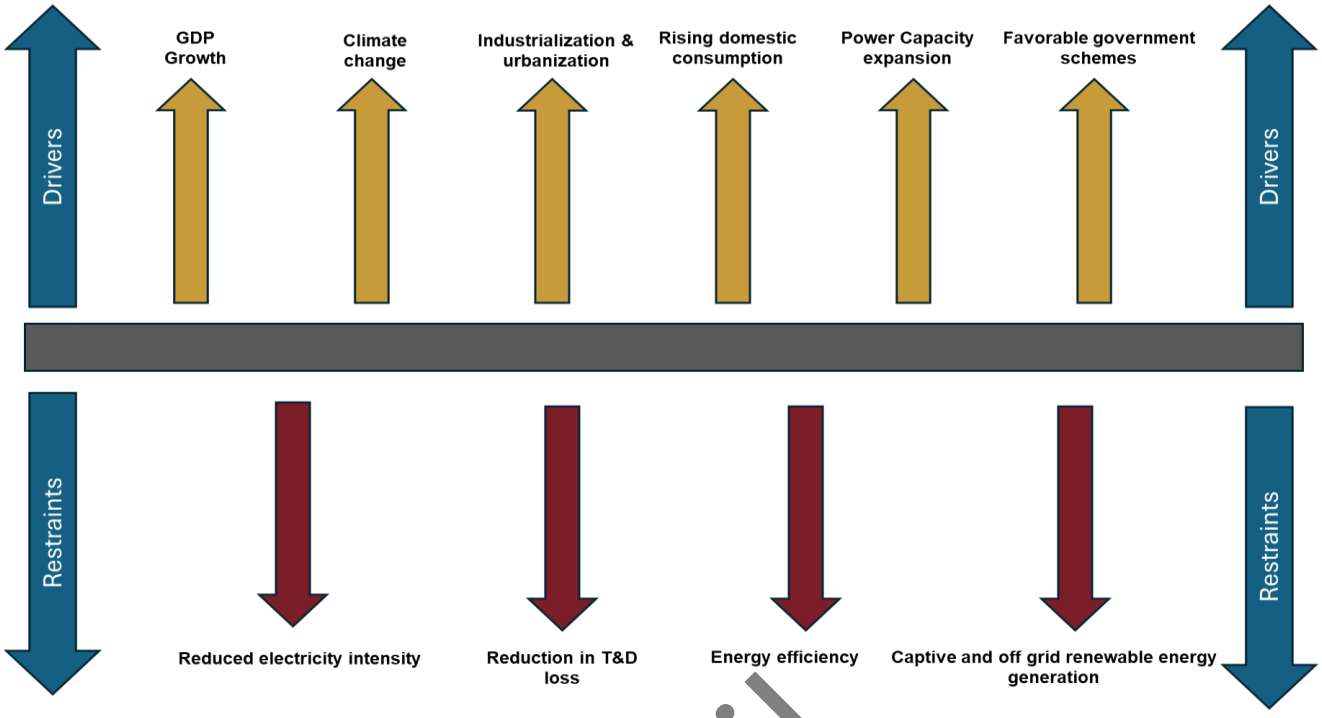
The constant rise in peak demand from FY19 to FY25, can be attributed to economic growth, seasonal vagaries, and an increasing daily average temperature that India has experienced over the last decade leading peak demand to touch 250 GW in May 2024.

Peak demand is expected to grow at annual average 6-8% over fiscal 2026-2031 to reach nearly 335-345 GW by fiscal 2031 with expected persistent high temperatures, rising urbanization, economic growth and infrastructure push leading to higher peak power.

Favourable long-term drivers to increase power demand in India

Power demand is closely associated with a country's GDP. Healthy economic growth leads to growth in power demand. India is already the fastest-growing economy in the world, with average GDP growth of 5.9% over fiscal 2012-24. The trickle-down effect of government spending on infrastructure through the National Infrastructure Pipeline, expansion of the services industry, rapid urbanisation, and increased farm income from agriculture-related reforms are key macroeconomic factors that are expected to foster power demand. Significant policy initiatives such as 24x7 power for all, Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) scheme to provide electricity connections to all households, green energy corridor to facilitate evacuation of RE power, green city scheme to promote the development of sustainable and eco-friendly cities, PLI scheme and low corporate tax rates among others are expected to further support power demand in the country.

Factors influencing power demand



Source: Crisil Intelligence

Apart from macroeconomic factors, power demand would be further fuelled by railway electrification, upcoming metro rail projects, growing demand for charging infrastructure due to increased adoption of electric vehicles, higher demand from key infrastructure and manufacturing sectors. However, increasing energy efficiency, a reduction in technical losses over the longer term, and captive as well as off-grid generation from renewables would restrict growth in power demand.

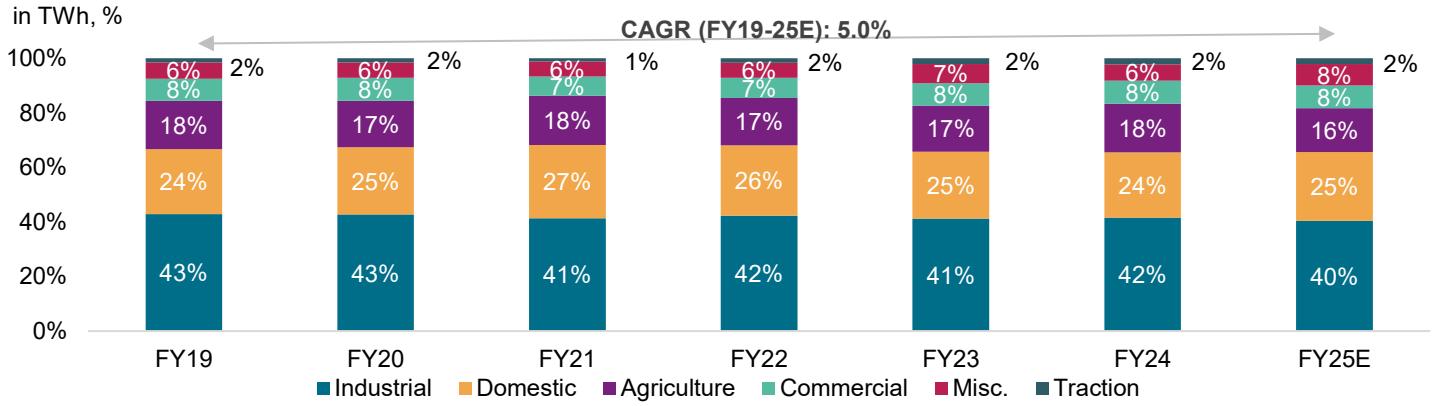
Electricity consumption has grown at a CAGR of 5.0% from FY19 to FY25E

In India, electricity consumption pattern across various sectors has exhibited a steady growth trend over the past five years, with the total consumption increasing at a CAGR of 5.0% from FY19 to FY25. The industrial sector remains the largest consumer of electricity, accounting for ~40% of the total consumption in FY25, the sector grew at a CAGR of 5% from FY19 to FY25. The domestic sector was the second-largest consumer in FY25 and grew at a CAGR of 6%, driven by increasing household demand for electricity.

The agriculture sector has also witnessed a steady growth in electricity consumption, with a CAGR of 3.4%, although its share in total consumption has remained relatively stable at around 16%. The commercial sector has experienced a CAGR of 5.5%, with its share in total consumption remaining around 8%. The traction sector, which includes electricity consumption for transportation, has also witnessed a high growth rate of 10.7%, indicating a growing trend towards electrification of transportation.

The overall electricity consumption has increased by ~34% from FY19 to FY25P, reaching 1,623 TWh in FY25E. The growth in electricity consumption across various sectors is driven by increasing economic activity, urbanization, and electrification of various sectors. The industrial and domestic sectors are expected to continue driving electricity demand, while the growth in the commercial and miscellaneous sectors is likely to be driven by increasing economic activity and urbanization.

Electricity consumption split (TWh) (FY19-25E)

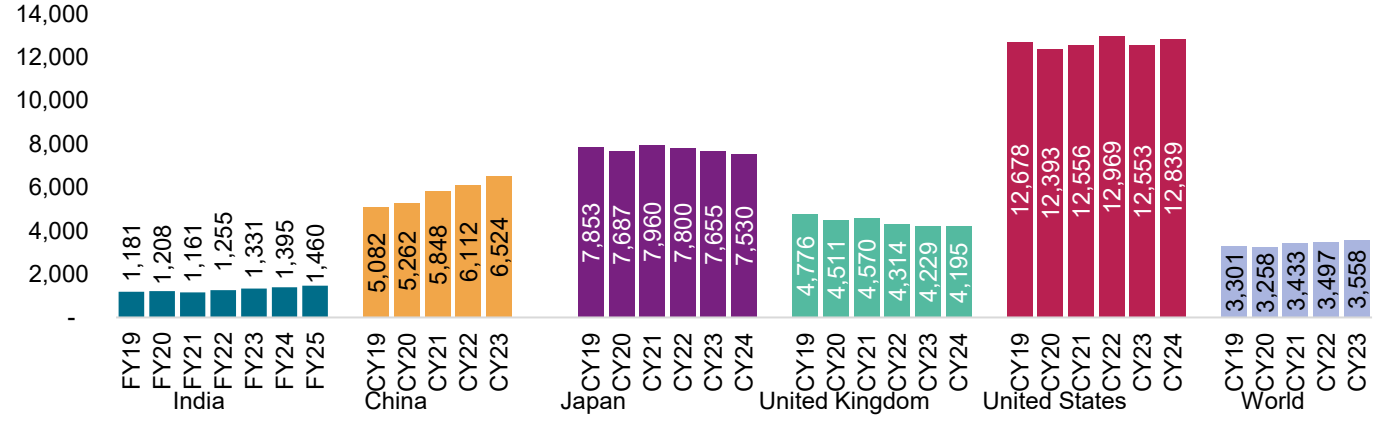


Electricity consumption split (TWh)	FY19	FY20	FY21	FY22	FY23	FY24	FY25E
Industrial	519	533	509	556	594	641	656
Domestic	288	309	331	340	353	369	409
Agriculture	213	211	221	228	244	275	260
Commercial	98	106	87	97	117	129	135
Misc.	72	70	68	73	102	93	128
Traction	19	19	15	22	30	34	35
Total	**1210**	**1248**	**1230**	**1317**	**1440**	**1541**	**1623**

Note: E – Estimated; Traction refers to the Electricity consumption for the propulsion of vehicles, primarily railways and other transportation systems

Source: CEA

Per capita electricity consumption across countries (kWh) (FY 19-25, CY 19-24)



Note: P: Provisional

Note: Data related to India is taken from CEA.

Source: World Bank, Crisil Intelligence

Per capita electricity consumption varied significantly across the selected countries during CY19–CY24, with the United States consistently recording the highest levels. India remained the lowest among the selected countries but witnessed a steady increase in per capita electricity consumption over the period. China also registered a gradual rise, while Japan and the United Kingdom exhibited relatively stable consumption trends. Overall, the data reflects varying electricity demand patterns across economies at different stages of development.

2 Overview of global investments driving demand for power products

In this section, Crisil Intelligence has given details on global investments in power and related sectors including power generation by source, investment in power grids and storage, renewable energy investment and capacity additions clean energy investments, telecommunication and transport infrastructure investments and global trends shaping the power sector. The section also examines the evolving final energy consumption mix, highlighting the growing role of electricity and the changing contribution of various energy carriers under different energy transition scenarios.

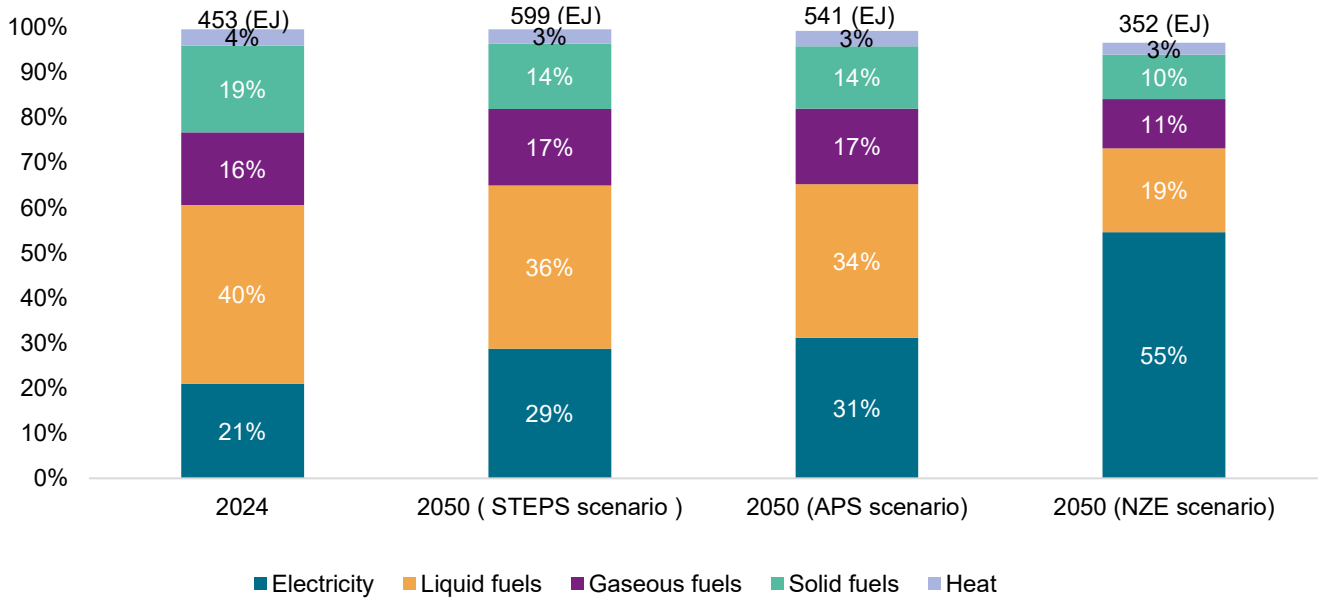
2.1 Distribution of final energy consumption

Following are the scenarios that are considered

- **Stated Policies Scenario (STEPS):** This scenario is designed to reflect the impact not just of existing policy frameworks, but also of today's stated policy plans
- **Announced Pledged Scenario (APS):** The Announced Pledges Scenario (APS) assumes that all aspirational targets announced by governments are met on time and in full, including their long-term net zero and energy access goals
- **Net Zero Emissions by 2050 Scenario (NZE):** The scenario maps out a way to achieve a 1.5 °C stabilization in the rise in global average temperatures, alongside universal access to modern energy by 2030

Total final energy consumption is projected to increase from 453 EJ in CY2024 to 599 EJ (+32.2%) in the STEPS scenario and 541 EJ (+19.4%) in the APS scenario by CY2050, while declining to 352 EJ (−22.3%) in the NZE scenario due to significant energy efficiency improvements. Across all scenarios, electricity emerges as the fastest-growing energy carrier, with its share rising from 21% (95 EJ) in CY2024 to 29% (172 EJ), 31% (169 EJ), and 55% (192 EJ) by CY2050, respectively. The declining share of liquid, gaseous, and solid fuels highlights the accelerating transition toward electrification and a lower-carbon energy system.

Total final energy consumption mix share



Note: The data is presented on a calendar-year basis (CY)

EJ Stands for exajoule.
Source: IEA, Crisil Intelligence

2.2 Global investments in power sector

Global power sector investments expected to post a growth of 30-35% by 2030 compared to 2023 based on APS scenario

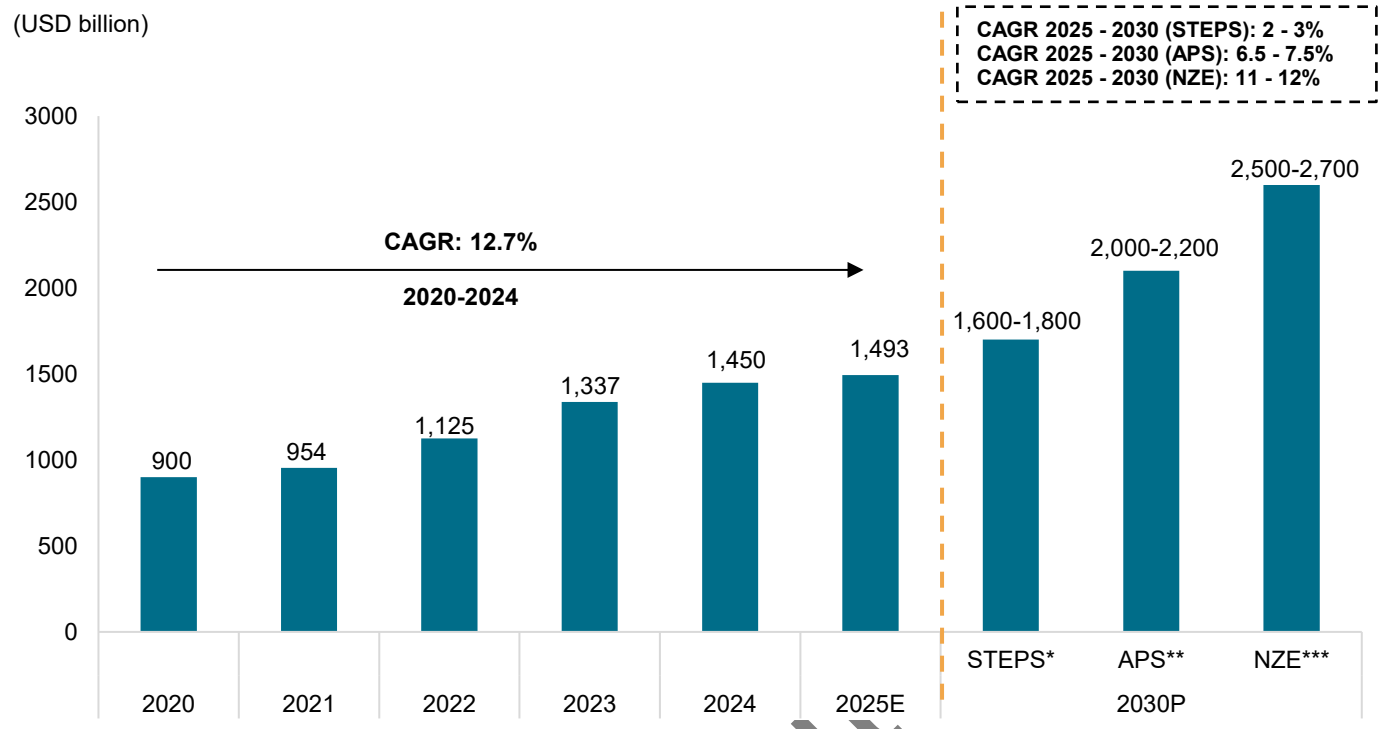
Global power sector investments increased from USD 900 billion in 2020 to USD 1,450 billion in 2024. Power sector investment grew by ~19% in 2023 and saw a further increase of 8% in 2024 to ~USD 1,450 billion. Major effect of the global energy crisis has been to accelerate the investments to deploy cleaner energy technologies. Moving forward, investments in power sector is estimated to moderately grow by ~3% to reach USD 1,493 billion by 2025 due to cost reductions for renewables and a decline in fossil fuels.

Global investments on renewables reached USD ~722 billion in 2023, driven by solar and wind investments. As there is a push for renewables in large markets such as USA, China, Europe and India, and the gradual decrease in supply chain pressures, higher capacity additions are expected in solar and wind power sectors going forward. As a result, 2024 investments in global renewables reached USD 760 billion.

Moving forward, the investments are estimated to further grow by ~3% to reach ~USD 780 billion by 2025. Despite recent uncertainty around interest rate cuts in 2025, the decrease in inflation in 2024 has led to lower costs for new debt, which is expected to support the financing of large-scale renewable energy projects. However, growing business uncertainty and potential economic slowdown may hinder some investments in the global power sector. Meanwhile, the electricity system is facing challenges, including lengthy permitting processes, rising equipment costs, and financing difficulties, which are slowing down the pace of investment. Grid infrastructure, in particular, has become a major bottleneck due to these issues, and it is likely to limit the deployment of new large-scale generation capacity in the near term. Efforts are underway to improve regulatory frameworks, business models, and financing structures, but it may take time to address these challenges.

Moving forward, global power sector investments are estimated to rise to USD 1,600-1,800 billion by 2030 in STEPS scenario, majorly driven by investments in wind PV, solar PV and grids. In the APS scenario, investment is estimated to increase to USD 2,000-2,200 billion by 2030 as low-emissions sources of energy and storage technologies are deployed more rapidly than in the STEPS. In case of NZE scenario, investments in global power sector is estimated to reach USD 2,500-2,700 billion by 2030.

Global investments in power sector (projections based on multiple scenarios)

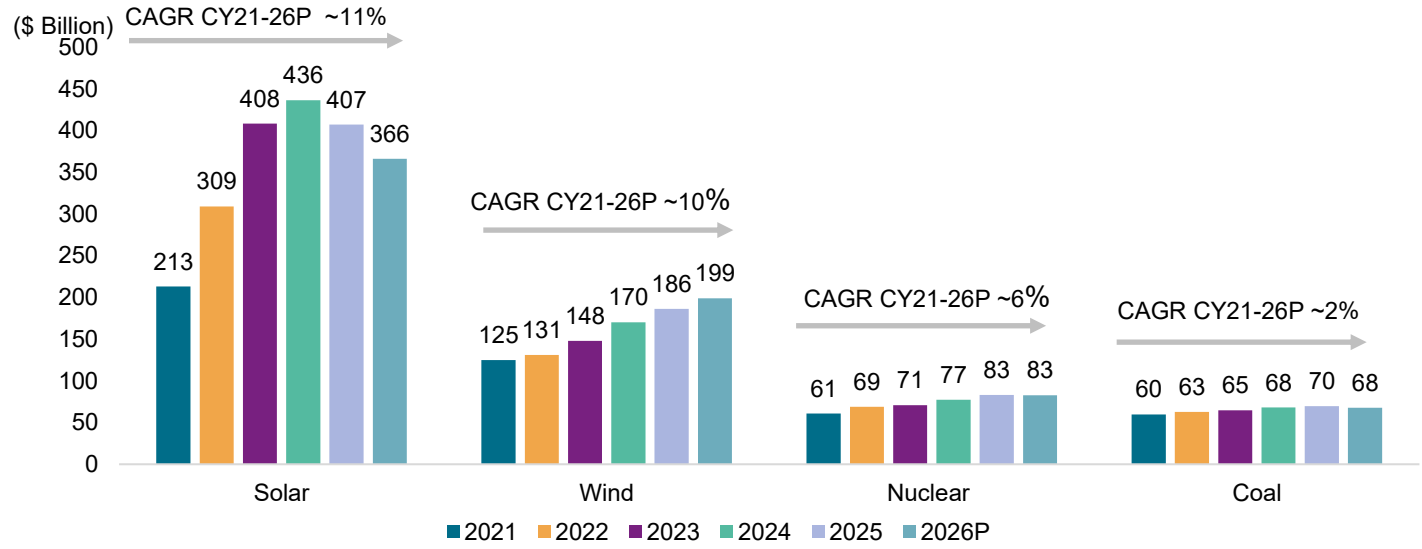


*Note: E stands for estimated, P stands for projected; *2030 projections based on Stated Policies Scenario (STEPS); **As per Announced Pledged Scenario (APS); ***As per Net Zero Emissions (NZE) by 2050 Scenario*

2020-2025 numbers based on 2024 USD rates and as per World Energy Investment 2025 ; projection numbers based on 2023 USD rates and as per World Energy Outlook 2024

Source: IEA, Crisil Intelligence

Renewable Energy Leads Global Power Investments ($ Billion)



Note: The data is presented on a calendar-year basis (CY)

Source: World Energy Investment 2026, IEA, Crisil Intelligence

Global investment trends indicate that solar continues to attract the highest level of capital, increasing from USD 213 billion in CY 2021 to projected USD 366 billion in 2026, despite peaking at USD 436 billion in CY 2024. Wind investment is projected to grow steadily from USD 125 billion to USD 199 billion during the same period, reflecting sustained momentum in renewable energy deployment. Meanwhile, nuclear investment is expected to rise gradually from USD 61 billion to USD 83 billion, supported by its role in delivering reliable low-carbon baseload power. In contrast, investment in unabated coal remains relatively flat, increasing only marginally from USD 60 billion to USD 68 billion, underscoring the global shift in capital allocation toward cleaner energy technologies. Overall, solar and wind remain the primary beneficiaries of energy transition investments, significantly outpacing conventional power generation technologies.

2.3 Overview of global investments in renewable energy segment

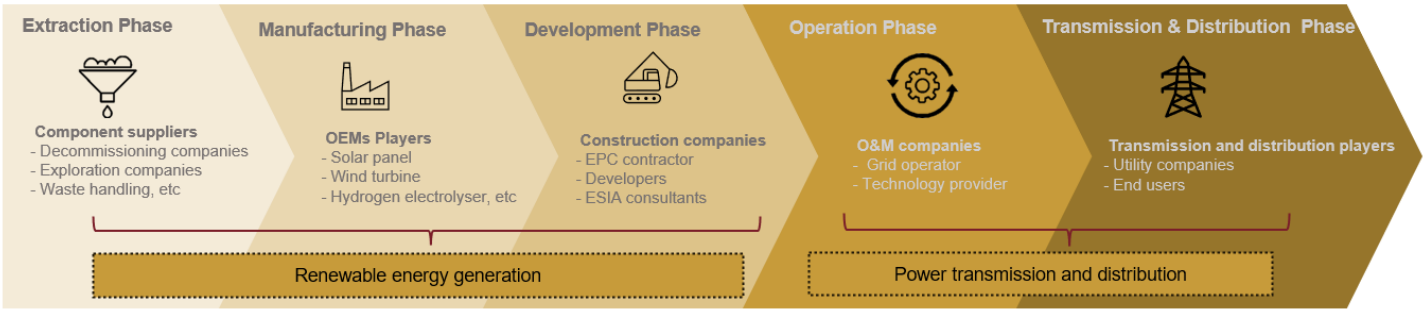
The renewable energy value chain is composed of two key stages:

- Renewable energy generation
- Power transmission and distribution

Within renewable energy generation phase, key processes include extraction phase, manufacturing phase and development phase, whereas in power transmission and distribution phase, operation phase and distribution phase are the major activities.

Additionally, a broad spectrum of stakeholders is engaged at each stage of the value chain, including material suppliers' equipment manufacturers, original equipment manufacturers (OEMs), project developers and owners, EPC contractors, operators, technology providers, end users, recyclers, etc. Moreover, the advancement and scalability of the renewable energy projects are contingent upon the involvement of various enablers, including policy makers.

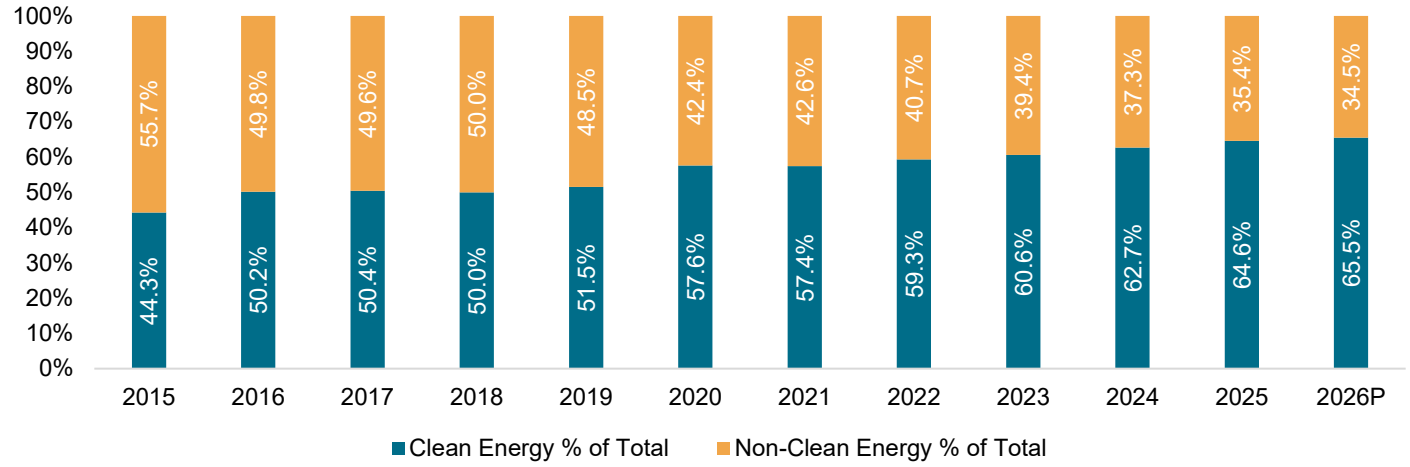
Value chain of renewable energy power generation



Note: ESIA- Environmental and Social Impact Assessment, EPC: Engineering, Procurement and Construction
Source: World Economic forum, Crisil Intelligence

2.4 Global energy investment: Total vs. Clean energy share (2015–2026)

Share of Clean and Non-Clean Energy Investment (2015–2026)



Note: P stands for projected

The data is presented on a calendar-year basis (CY).

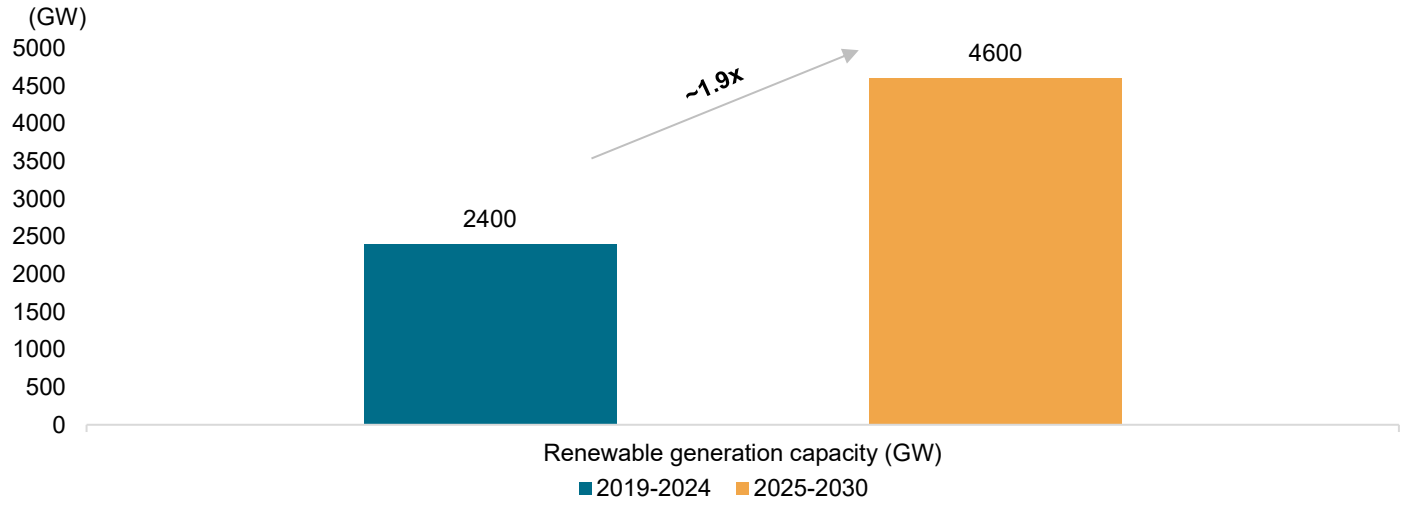
Source: IEA, Crisil Intelligence

The share of clean energy in the total energy mix has increased steadily from 44.3% in CY 2015 to an estimated 65.5% in CY 2026, reflecting the accelerating adoption of renewable and low-carbon energy sources. Over the same period, the share of non-clean energy is projected to decline from 55.7% to 34.5%, indicating a gradual transition towards a cleaner energy mix. The shift has become more pronounced since 2020, driven by increasing investments in renewable energy, supportive government policies and global decarbonization initiatives, highlighting the ongoing transformation of the energy sector.

2.5 Renewable electricity capacity growth

Global renewable electricity generation capacity is projected to expand significantly over the 2025–2030 period, with cumulative capacity additions expected to reach approximately 4,600 GW, compared with around 2,400 GW during 2019–2024. This acceleration reflects strong policy support, declining technology costs and rising investments in renewable energy across major economies. Solar PV is expected to remain the primary growth driver, accounting for the majority of new capacity additions, supported by utility-scale projects and distributed installations, while wind power is also expected to contribute meaningfully to the expansion of global renewable capacity.

Global renewable electricity generation capacity



Note: The data is presented on a calendar-year basis (CY).

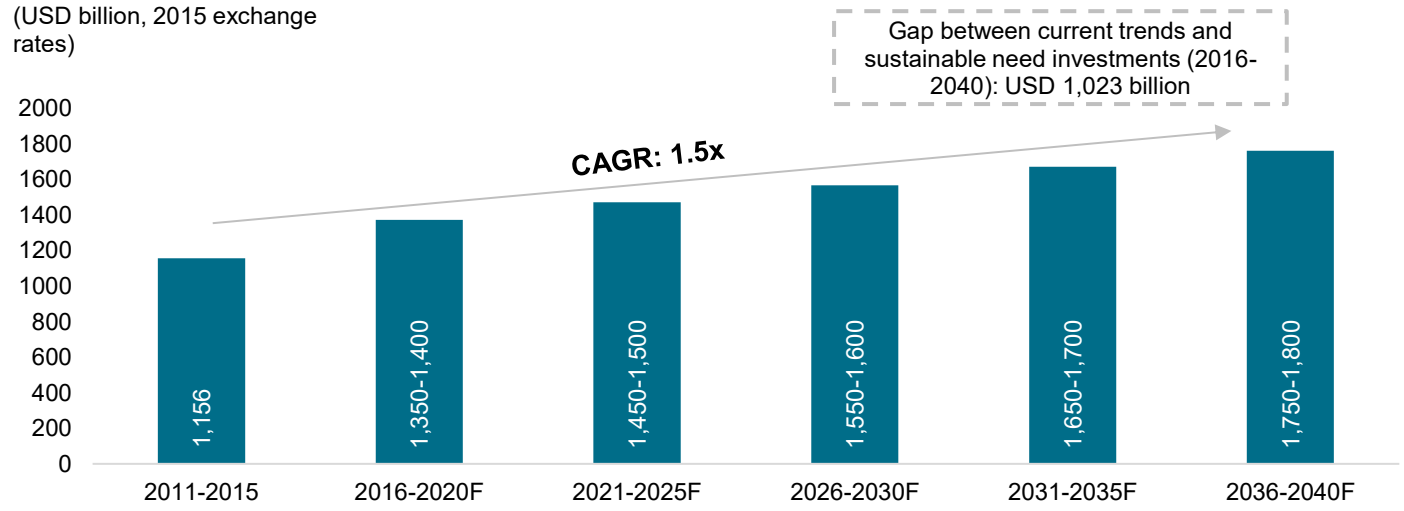
Source: IEA, Crisil Intelligence

2.6 Overview of global investments in telecommunication & transport infrastructure and growth outlook

Average annual investment in telecommunication sector to increase from USD 233 billion to USD 314 billion leading to higher requirement of power & electric equipment

As per G20 Global Infrastructure Outlook Report, global investments in the telecommunication sector increased from USD 240 billion in 2010 to USD 296 billion in 2015 at a CAGR of 4.3%. Average annual spending was USD 233 billion during these years. Based on current trends, cumulative investments in the sector will be ~USD 7,838 billion (2016-2040) recording an average of USD 314 billion. Based on investment needs to achieve sustainable development goals, investments between 2016 and 2040 should be ~USD 8,861 billion, at an annual average of USD 354 billion.

Global telecommunication infrastructure spending



Note: All numbers based on 2015 US dollar prices and exchange rates; forecasts based on current trends given in Global Infrastructure Outlook by G20

Source: G20 Infrastructure Outlook, Crisil Intelligence

Globally the digital transformation is evolving faster. The average mobile data traffic per active smartphone (is projected to grow from 17 GB per month in 2023 to around 42 GB per month in 2029. Additionally, 5G is expected to become the dominant mobile access technology by subscription in 2028. Global 5G subscriptions1 are forecast to reach close to 5.6 billion in 2029, making up 60 percent of all mobile subscriptions at that time.

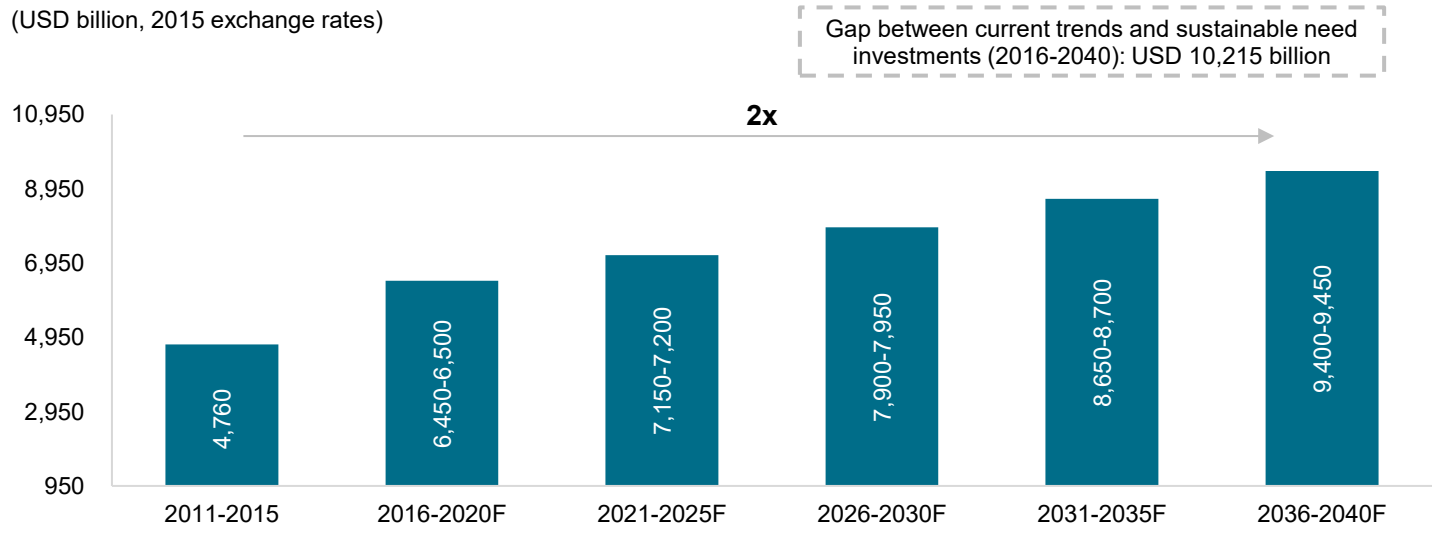
Countries with large population like India have shown very positive growth in terms of internet subscribers, growing from 422.2 million subscribers in FY17 to 954.4 million subscribers in FY24. The wired-broadband market in India also found a strong uptake amid the pandemic, thanks to higher data-usage need, driven by work and study at home. The number of wired broadband subscribers increased from 18.2 million in FY17 to 40.1 million in FY24. To increase the broadband connectivity further, Indian government has approved Rs 1.39 trillion outlay for BharatNet telecom project for providing last mile connectivity across 6.4 lakh villages in India.

Increase in investments in the transport sector to further drive demand for power & electric equipment

As per G20 Global Infrastructure Outlook Report, global investments in the transport & mobility sector remained fairly constant between 2010-2015 in the range of USD 975-982 billion. Average annual spending was USD 977 billion during these years. Governments are allocating investments in building extensive road networks for freight transportation, ports, tunnels, airports and commercial buildings. There is a steady growth in personal mobility (including intercity) and road freight transportation over longer distances with shorter turnaround time. Based on current trends, cumulative investments in the sector will be ~USD 39,660 billion (2016-2040) recording an annual average of USD 1,586 billion. Based on investment needs to achieve sustainable development goals, investments between 2016 and 2040 should be ~USD 49,875 billion, at an annual average of USD 1,995 billion.

Global transport & mobility investments

(USD billion, 2015 exchange rates)



Note: all numbers based on 2015 US dollar prices and exchange rates; forecasts based on current trends given in Global Infrastructure Outlook by G20
Source: G20 Infrastructure Outlook, Crisil Intelligence

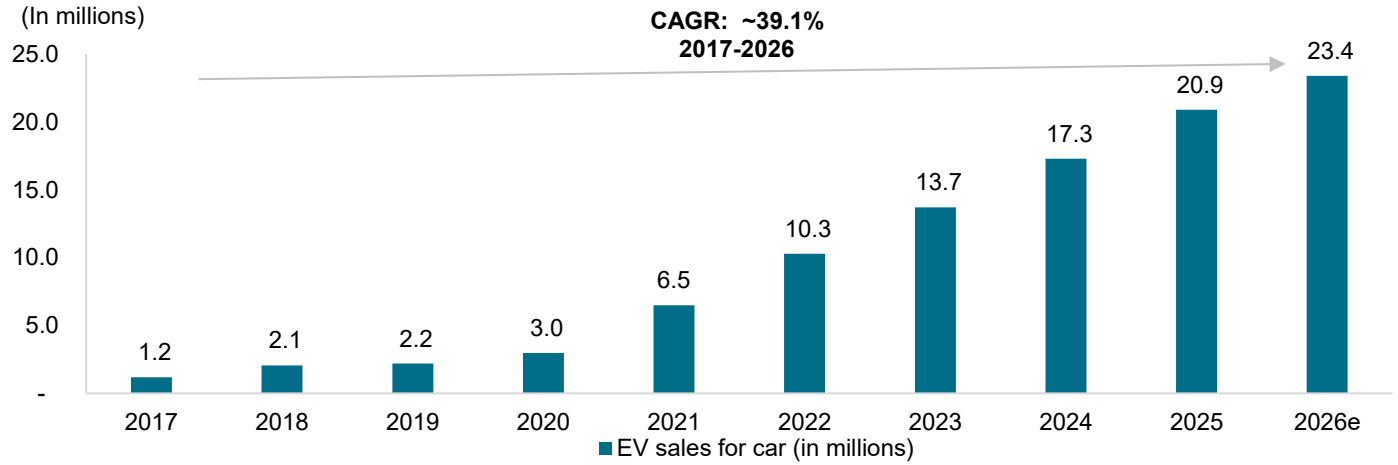
Global sales of electric cars neared ~20.9 million in 2025

Global electric vehicle (EV) sales increased from 1.2 million units in 2017 to an estimated 23.4 million units in 2026, registering a CAGR of approximately 39% during the period. The increase in sales reflects the gradual expansion of EV adoption across major markets, supported by evolving regulatory frameworks, advancements in vehicle and battery

1 As per Ericsson Mobility report, 5G subscription is counted as such when associated with a device that supports New Radio (NR), as specified in 3GPP Release 15 and is connected to a 5G-enabled network.

technologies, and improving charging infrastructure. Going forward, continued investments in the EV ecosystem and broader product availability are expected to support the segment's growth trajectory, although the pace of growth may vary across regions depending on policy support, infrastructure development, and consumer demand.

Global sales of electric cars (2017-2024)

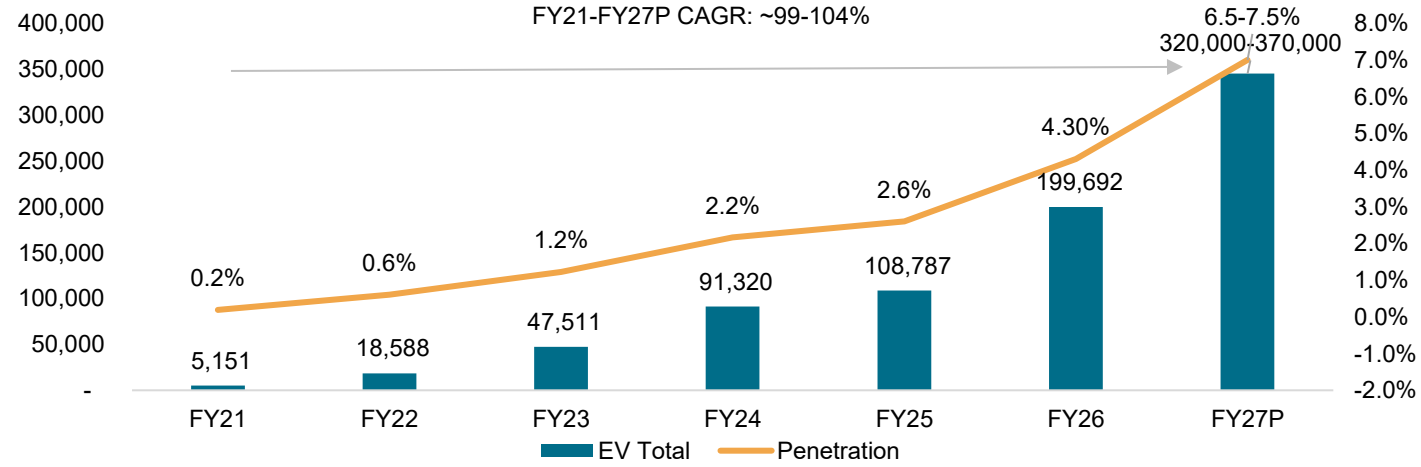


Note: e stands for estimated
Years are in CY
Source: IEA, Crisil Intelligence

Electric passenger vehicle (EV) penetration in India is projected to increase to 6.5-7.5% in FY 27

EV sales for passenger vehicles in India are expected to witness strong growth through FY27P, supported by increasing model availability and improving market penetration. Sales are projected to rise from around 5,100 units in FY21 to 320,000–370,000 units by FY27P, translating into a CAGR of approximately 99–104%. EV penetration is expected to increase from 0.2% in FY21 to 6.5–7.5% by FY27P, while the number of available EV models is projected to expand from 3 in FY18 to 29 by FY26. The broader product portfolio and higher participation from OEMs are expected to support wider consumer adoption and contribute to the continued growth of the passenger EV market.

EV sales for passenger vehicles- India (FY21-27P)



Source: Crisil Intelligence

3 Assessment of Indian electrical wires and cables and Power conductors industry

3.1 Introduction to electrical wires and cables

Electrical wires and cables are essential components used for transmitting electricity, data, or signals. While a wire typically consists of a single conductor, a cable is an assembly of one or more conductors, often insulated and bundled together. There are various types and varieties of cables, each designed to perform a specific function. Classification is based on the core structure of the conductor metal (majorly copper and aluminium), number of cores, type of insulation material and arrangement, etc.

Power and electrical cables are segmented into the following, based on voltage capacity

Category	Voltage Capacity
Low Tension / Voltage (LV)	Generally, below 3.3kV
High and Medium Tension / Voltage (HV)	Generally, between 3.3KV to 33.0kV
Extra High voltage (EHV)	Generally, above 33 KV

Source: Crisil Intelligence

Major uses of power cables are in the power sector (central, state and private electricity utilities) and sectors like petrochemicals, mining, steel, non-ferrous, shipbuilding, cement, railway, and defence.

The performance and durability of cables depend on the quality of raw materials. Specialized applications require superior chemical, mechanical, thermal and electrical performance from cables, resulting in usage of high-performance materials in cable built and manufacturing process. Additionally, it is seen that in order to achieve properties suited for varying applications, every cable has a distinguished construction. In India, the cables and conductors' industry are constrained by the raw material price risk and stiff competition.

The number of SKUs of cables and wires are very high, with 500-600 fastest selling SKUs, differing in application and offering variation in cross-sectional area (size), number of cores used, core material (mainly copper or aluminium), insulation material used, armoured or unarmoured construction for strength, etc.

Type of cables and its applications

Types of cables	Description	Applications
Railway signal cables	Railway signal cables are specialized cables designed to provide reliable and safe transmission of signal information for railway operations. These cables are designed to withstand harsh environmental conditions, such as extreme temperatures, vibration, and moisture, and are used to control and monitor railway signals, track circuits, and other safety systems.	Used in railway signalling systems to control and monitor train movements, track circuits, and other safety systems, ensuring safe and efficient railway operations.
Building Wires	Building wires are usually made up of copper and aluminium. These are majorly used in residential settings and their carrying capacity/voltage depends on their end use.	Commonly used in everyday household items like for connecting household appliances, power outlets, etc.
Communication Cables	Communication cables are specifically designed to support data transmission across distance at high speed and minimal loss. Examples include, LAN cables, Optic fibre cables, etc.	Used for transmission of data/ voice/ video signals at high speed without major energy loss.

Types of cables	Description	Applications
Control and Instrumentation cables	Control and Instrumentation cables are generally used in industrial settings to carry low voltage signals with high accuracy. These cables are properly shielded to ensure no external signal interference and are mainly used to monitor/ control electric systems. The functions of measurement and control are vital in manufacturing and processing applications.	Few of the applications include industrial equipment control, process controls, for e.g. in oil and gas or chemical plants, or mass transit systems which require cables to be heat resistant, resistance due to harsh environment and chemicals, etc.
Power Cable	A power cable is an assembly of two or more conductors with insulation and a protective jacket. The power cables industry is classified into low voltage (3.3 kV and below), medium voltage and high voltage (3.3-33.0 kV), and extra high voltage (33 kV and above) cables. These cables are predominantly used in sub-transmission and distribution of power.	Transmission and distribution of electricity in mainly commercial and industrial settings
Other special cables	This class of cables includes cables that are especially designed for a particular end use/ industry due to particular requirements. These types of cables are usually provided as customized solutions against stringent requirements, including temperature, tensile strength, and chemical resistance. For example, Solar cables, which are required to have lifetime reliability of up to 30 years, resistance to extreme temperatures (-40°C to 120°C), ozone, and ultraviolet (UV), halogen free, flame and fire retardancy, etc.	Multiple specialized applications including sonar detection, mine sweeping and defense purposes across industries like marine, defense, aerospace, etc.

Source: Crisil Intelligence

3.2 Overview of India wires and cables market

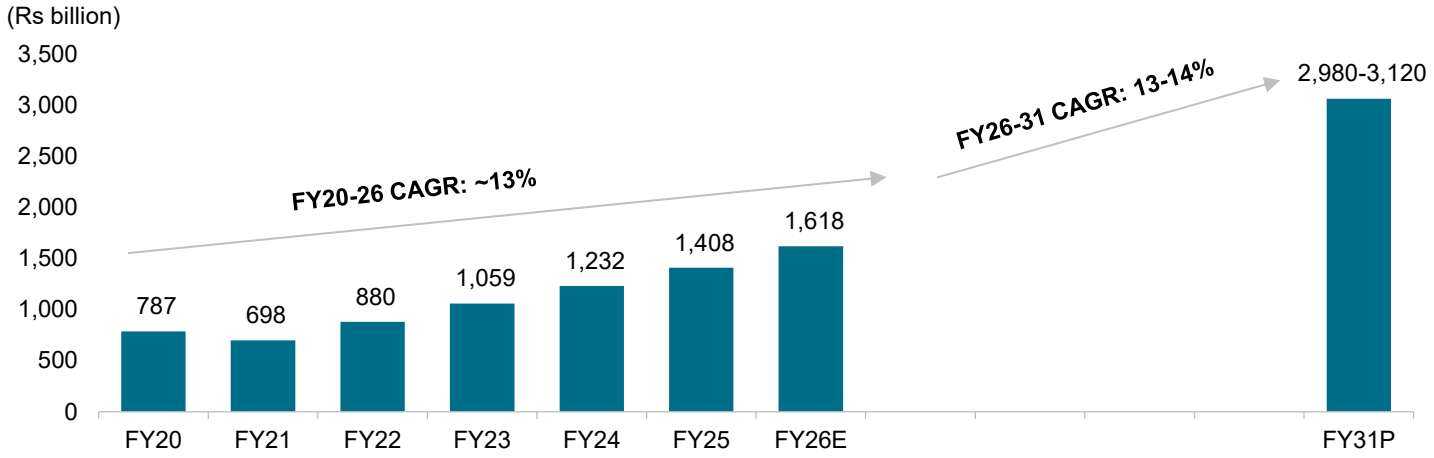
India wires & cables market to grow at 13-14% CAGR between FY26-31

In FY26, cables and wire market was valued at ~Rs 1,618 billion, up from Rs 787 billion in FY20, registering a CAGR of 13%. This notable surge can be primarily attributed to a remarkable growth of High Voltage (HV) & Extra-High Voltage (EHV)- 33 kV and above cables and Elastomeric Cables also known as rubber cables, are a type of electrical cable that uses an elastomer (a flexible, rubber-like material) for insulation and/or sheathing, which have registered exponential growth on the back of increased expansion of transmission lines and electrification initiatives in rural areas. Other cable categories contributing substantially to the accelerated market growth include PVC Control Cables & Instrumentation, and building, driven by pickup in construction activities in both commercial and residential sectors. Additionally, the expansion is also driven by higher production volumes and elevated realizations due to rising commodity prices.

Looking ahead, Crisil Intelligence projects the wires and cables market to grow at a CAGR of 13-14% between FY26 and FY31, reaching Rs 2,980-3,120 billion by FY31. This robust growth will be driven by substantial investments in distribution networks under the Revamped Distribution Sector Scheme (RDSS) in the lower voltage segment, as well as investment plans by Central Transmission Utility Limited (CTUIL), the Inter-State Transmission System (ISTS), and the Green Energy Corridor (GEC) in the high voltage segment. Along with this , over long-term investment in building & construction is projected to increase at an average annual rate of 3-5% between fiscal years 2027 and 2031, in line with the growth in residential demand.

Additionally, ongoing expansion of data centers (backed by rapid digitalisation and cloud adoption, rising AI workloads, favourable regulations and policy support), expanding digital connectivity, smart grid investments, etc. will further support market expansion.

Market size of wires and cables in India

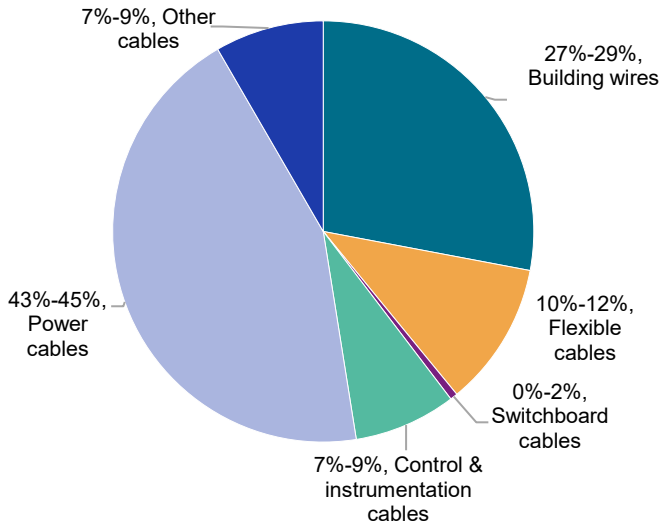


Note: The market size estimates for the Indian wires and cables sector have been updated by CRISIL Limited from the data included in its previous report titled 'Assessment of cables, conductors industries and investments in power sector in India' dated September 2025. These revisions are pursuant to a change in methodology adopted by Indian Electrical & Electronics Manufacturers' Association (IEEMA) for certain product categories as well as consequential recalibration by CRISIL Limited of its estimation framework, including refinement of the organised–unorganised market split. Pursuant to these changes, certain historical organised-market size and implied growth have been revised, which may affect previously reported figures and growth rates. The revised estimates are based on triangulation with industry participants and external data sources that intend to provide a more accurate and consistent view of current market trends.

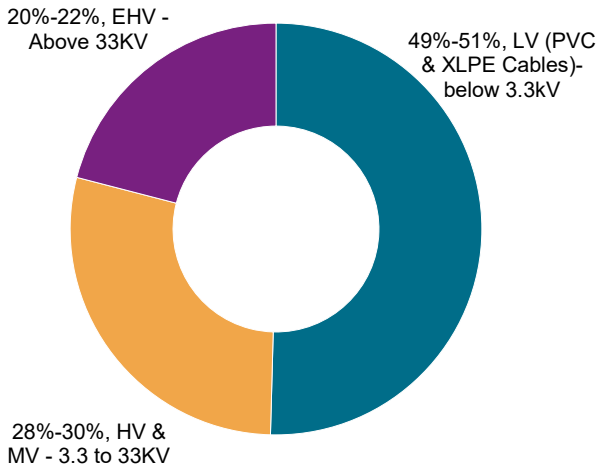
Source: IEEMA, Crisil Intelligence

Power transmission cables formed the highest market share in FY26 in value terms

Segment wise split of cables and wires market (FY26)



Segment wise split of power transmission cables (FY26)



Source: IEEMA, Crisil Intelligence

In FY26, power transmission cables formed the highest market share in the overall domestic cables and wire industry at 43-45%, followed by building wires at 27-29%.

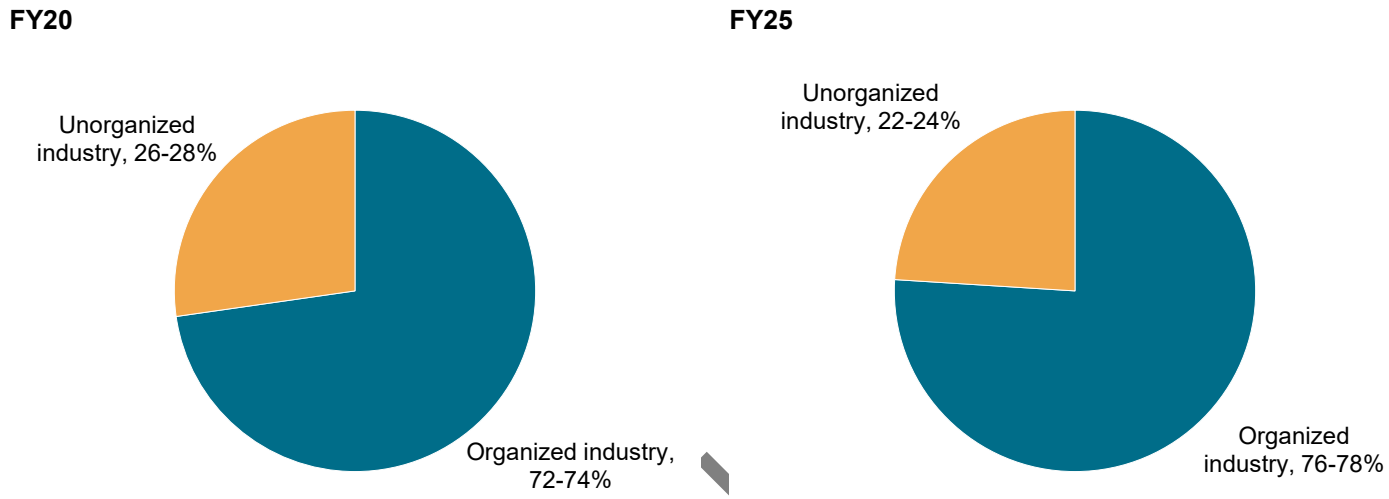
Within power transmission cables, Low Voltage Polyvinyl Chloride (LV-PVC) and Cross-Linked Polyethylene (XLPE) Cables had the highest share of 49-51%, followed by HV and MV (11 kV, 22 kV and 33 kV) at 28-30% and EHV (33 kV

and above) at 20-22%. The continued expansion of power transmission and distribution infrastructure, growth in renewable energy integration and increasing investments in grid modernization are expected to drive demand for Medium Voltage (MV), High Voltage (HV) and Extra High Voltage (EHV) cable systems.

The presence of high share of power transmission cables in owing to favourable government initiatives in power segment like rural electrification schemes, railway electrification, etc.

Additionally, increasing construction spends in building segments coupled with growing Fast-Moving Electric Goods (FMEG) industry is contributing to the demand of building wires.

Organized players dominate the overall domestic cables and wires industry



Source: IEEMA, Crisil Intelligence

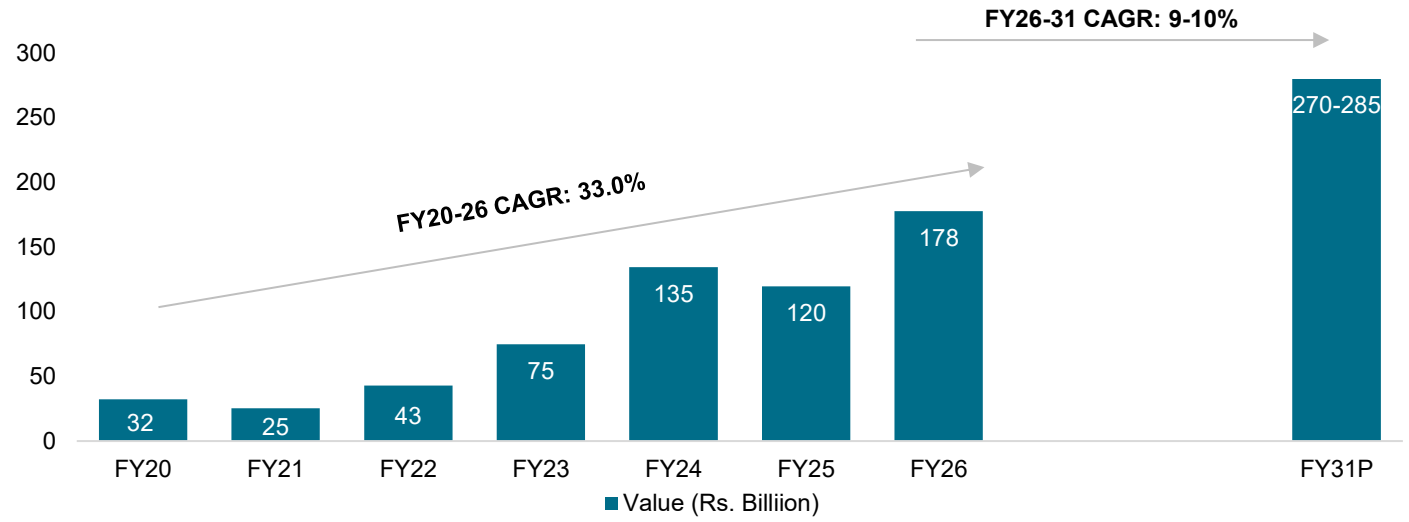
The share of organized players has improved between FY20 and FY25 from ~72-74% to 76-78%. Consequently, share of unorganized industry has dropped from 26-28% in FY20 to 22-24% in FY25.

Additionally, within the overall industry, share of organized players is relatively higher in cables like power transmission cables.

Moving forward, the share of organized players is expected to increase further as the industry consolidates.

3.3 Exports of wires and cables to grow at a CAGR of 9-10% between FY26-31

Export value for wire and cables



Note: Crisil Intelligence has considered following HSN codes for the analysis of wires and cables exports from India- 74081190, 85359090, 85444920, 85444930, 85446020, 85446030. These include copper wires, plastic insulated conductors, etc.

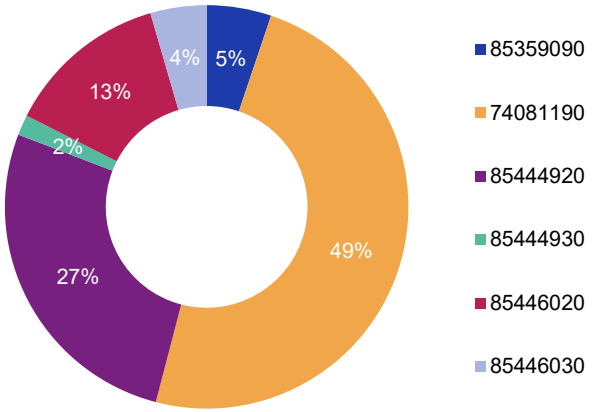
P: Projected

Source: Ministry of Commerce & Industry, Crisil Intelligence

The exports of wire and cables grew to ~Rs 178 billion in FY26, marking a substantial increase from Rs 32 billion in FY20 and registering a CAGR of 33.0%. This growth can be principally attributed to increase in renewable energy projects, rapid electrification, EVs, and data centers. China+1 is also working for cables specifically. Western utilities, contractors, and distributors are actively qualifying alternative suppliers, and Indian cable manufacturers that already hold international certifications (UL, CPR, AS/NZS) are capturing this diversification demand. Some of the key export partners for wires and cables in FY26 include Saudi Arabia, USA, UAE, UK, Australia, etc. Export destinations for wires and cables among African countries was led by Nigeria, South Africa, Liberia, Tanzania, Kenya etc.

Moving forward, Crisil Intelligence expects cables and wires export to moderate and grow at a CAGR of 9-10% between FY26-31 and reach Rs 270-285 billion in FY31.

HS code wise share of export of wires and cables for FY26



export code	Description
74081190	OTHR COPPR WIRE WTH MAX CRS-SEC DIAMTR>6MM
85359090	OTHERS
85444920	PLSTIC INSLTD CNDCTRS FR <= 1000V NOT FITTED WITH CONNECTORS
85444930	RUBBER INSLTD CNDCTRS FR <= 1000V USED FOR NOT FITTED WITH CONNECTORS
85446020	PLASTIC INSLTD CNDCTRS FR VLTGE >1000 V
85446030	RUBBER INSLTD CNDCTRS FR VLTGE >1000 V

Source: Ministry of Commerce & Industry, Crisil Intelligence

Country wise export value of wires and cables for FY26

Number	Country	Share in export (FY 26)
1	Saudi Arabia	45%
2	United States of America (USA)	12%
3	United Arab Emirates (UAE)	10%
4	Australia	4%
5	Nepal	3%
6	United Kingdom (UK)	3%
7	Nigeria	2%
8	Qatar	2%
9	Russia	1%
10	Germany	1%
11	Others	19%

Note: Above percentage value may not add to 100% due to rounding off error.

Source: Ministry of Commerce & Industry, Crisil Intelligence

Saudi Arabia was the largest export destination for India's wires and cables in FY26, accounting for 45% of total exports. The United States and the UAE were the next largest markets, contributing 12% and 10%, respectively. Other key export destinations included Australia, Nepal, the UK, Nigeria, Qatar, Russia, and Germany, each with relatively smaller shares. The remaining 19% of exports were distributed across other international markets, indicating a broad export footprint.

Cables and wires production crossed 21.2 million km in FY26

The cable industry is dependent on the availability and quality of specialized polymer compounds, which play a critical role in determining the performance, reliability and longevity of cable products. The increasing investments in power transmission and distribution infrastructure, renewable energy integration, urbanization and industrial development are expected to continue driving demand for power cables across voltage segments. These trends are expected to support corresponding demand for polymer compounds used in cable manufacturing.

In FY26, cables and wire production in India crossed 21.2 million km, up from 14.7 million km in FY20, registering a CAGR growth of 6.3%.

Collectively, the growth momentum for specialty product segments is underpinned by strategic sectoral investments, evolving industry requirements, technological advancements, and a supportive policy environment all contributing to the sector' expansion.

Total production of cables and wires

Production (in '000 kms)	FY20	FY21	FY22	FY23	FY24	FY25	FY26	CAGR FY20-26
LV (PVC & XLPE Cables) – 1.1 kV and 3.3 kV	617	478	472	567	645	736	798	4.4%
MV & HV- 11 kV, 22 kV and 33 kV	49	54	49	57	97	118	139	19.0%
EHV- 33 kV and above	6	3	3	5	9	11	12	13.2%
Control and instrumentation cables	626	543	598	758	845	740	888	6.0%
Elastomeric cables	165	158	158	200	203	258	164	0.0%

Production (in '000 kms)	FY20	FY21	FY22	FY23	FY24	FY25	FY26	CAGR FY20-26
Jelly filled cables	129	84	86	47	53	34	29	-22.1%
Switchboard cables	890	781	834	1,041	1,035	1,154	721	-3.4%
Building wires	8,966	7,793	8,685	10,951	11,368	11,998	13,062	6.5%
Flexible cables	3,265	3,056	3,519	4,243	4,955	5,212	5,421	8.8%
Total Production (in '000 kms)	14,713	12,950	14,404	17,870	19,209	20,261	21,236	6.3%

Note: The market size estimates for the Indian wires and cables sector have been updated by CRISIL Limited from the data included in its previous report titled 'Assessment of cables, conductors industries and investments in power sector in India' dated September 2025. These revisions are pursuant to a change in methodology adopted by Indian Electrical & Electronics Manufacturers' Association (IEEMA) for certain product categories as well as consequential recalibration by CRISIL Limited of its estimation framework, including refinement of the organised–unorganised market split. Pursuant to these changes, certain historical organised-market size and implied growth have been revised, which may affect previously reported figures and growth rates. The revised estimates are based on triangulation with industry participants and external data sources that intend to provide a more accurate and consistent view of current market trends

Production data of Elastomeric cables is in core kilometres

LV-PVC: Low Voltage Polyvinyl Chloride

XLPE: Cross-Linked Polyethylene

MV: Medium Voltage

HV: High Voltage

EHV: Extra-High Voltage

CAGR and Total Production numbers might differ due to rounding off error

Source: IEEMA, Crisil Intelligence

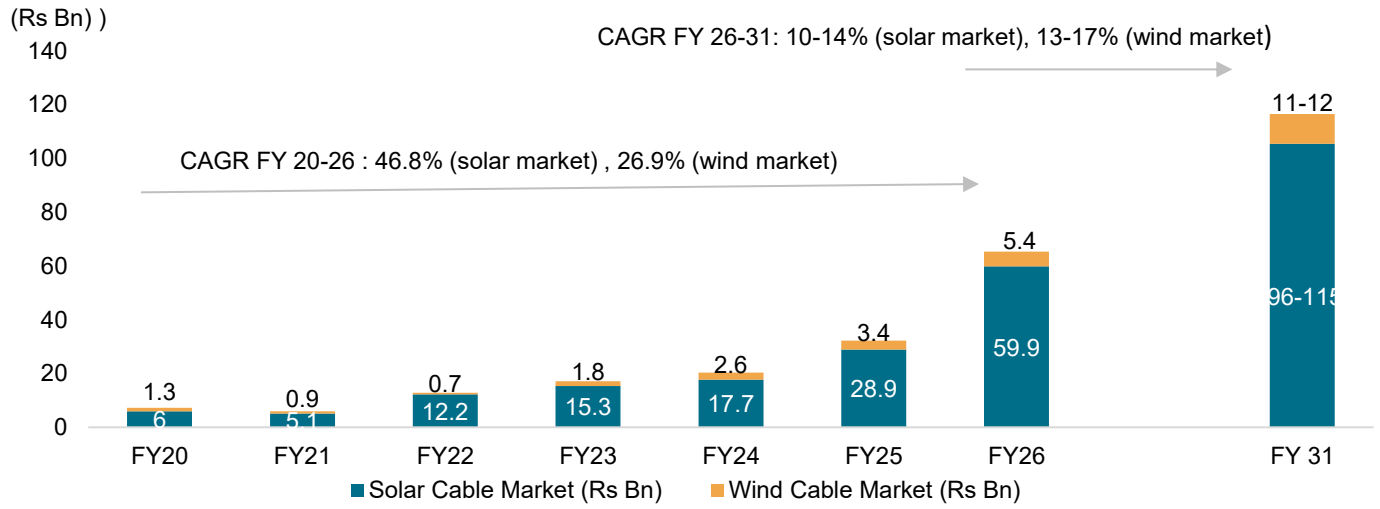
3.4 Increasing demand of E-beam irradiated cable

Within the wire and cable sector, electron beam (E-beam) irradiation offers improved cross-linking and polymer modification for wire, cable, and tubing items. Typically, this process does not necessitate additives and poses no risk of generating hazardous chemical by-products, thereby proving to be more ecofriendly than conventional wires. This technology leads to the enhancement of their mechanical, thermal, and chemical-resistant properties, resulting in overall improved physical characteristics. This includes reduced thickness, higher temperature resistance, and increased current-carrying capacity, ultimately extending the cables' lifespan. Moreover, e-beam cross-linking not only augments durability and current capacity but also mitigates the risk of fires caused by overload or short circuits, thus safeguarding lives and property. Due to their extended lifespan and superior performance compared to traditional cables, e-beam cross-linked cables are witnessing increased demand owing to their widespread adoption in commercial, industrial as well as medical industry

3.5 Indian solar and wind cable market: Historical trends and growth outlook (FY20–FY31)

The solar cable market has witnessed significant expansion over the past few years, increasing from Rs 6.0 billion in FY20 to Rs 59.9 billion in FY26, reflecting a 46.8% CAGR. This growth has been supported by rising solar power installations and the increasing deployment of renewable energy infrastructure. Looking ahead, the market is projected to reach Rs 96–115 billion by FY31, implying a 10–14% CAGR over FY26–FY31. In comparison, the wind cable market increased from Rs 1.3 billion in FY20 to Rs 5.4 billion in FY26, registering a 26.9% CAGR. The market is expected to expand further to Rs 10–12 billion by FY31, supported by a projected 13–17% CAGR. Overall, both segments are expected to maintain a growth trajectory through FY31, with the solar cable market continuing to account for a larger share of the renewable cable market due to its relatively larger market size and sustained capacity additions.

Solar and wind cable market: Past performance and future projections



Source: Crisil Intelligence

3.6 Introduction to conductors

Conductors are used in transmission and distribution lines to deliver bulk power from generating stations to the load centres and large industrial consumers. The transmission system delivers bulk power from power stations to the load centres and large industrial consumers beyond the economical service range of the regular primary distribution lines whereas distribution system delivers power from power sector or substations to the various consumers.

There are different type of Conductors such as all aluminium conducts (AAC), all alloy aluminium conductors (AAAC), aluminium conductors steel reinforced (ACSR), high ampacity conductors, AL-59 alloy conductors, High-Performance Conductors (HPC) and High Temperature Low Sag (HTLS). Bulk power transmission is generally done over bare, overhead conductors at voltage levels of 220 kV and above.

Major types of Conductors

Conductor	Description
AAC – All Aluminium Conductors	The AAC conductors are used in low and high voltage overhead lines, majorly in urban areas where spans are usually short but high conductivity is required.
ACSR – Aluminium Conductor Steel Reinforced	ACSR conductor is a high-capacity, high-strength stranded conductor typically used in overhead power lines due to its superior conductivity, low weight and low cost.
AAAC – All Aluminium Alloy Conductors	AAAC conductors are made from high strength Aluminium Magnesium-Silicon Alloy, designed to get better strength to weight ratio and offer improved electrical properties, excellent sag-tension characteristics and superior corrosion resistance when compared with ACSR.
ACSS - Aluminium Conductor Steel Support	ACSS conductor is a high-temperature, low-sag stranded conductor typically used in overhead power lines due to its superior heat resistance, high strength and low sag characteristics.
Eco-conductors	ECO conductors are designed to reduce energy losses and minimize environmental impact, offering improved conductivity, lower resistance and enhanced durability, making them suitable for use in eco-friendly power transmission and distribution systems.
MVCC- MV overhead covered conductor	MVCC conductors are designed to improve the reliability of electricity distribution, consisting of a conductor surrounded by an insulating covering to prevent accidental contacts with other conductors or grounded parts, and are suitable for medium-voltage applications between 6.6KV to 33KV.

Conductor	Description
AECC - Aluminium Encapsulated Carbon Core Conductor	AECC conductors feature a pre-tensioned carbon fiber core protected by a seamless aluminium encapsulation layer, delivering 2-3 times the capacity of ACSR with half the line losses, while maintaining low thermal sag and compatibility with traditional installation methods, making them a cost-effective solution for grid modernization.
OPGW- Optical Ground Wire/ Optical fibre composite overhead ground wire	OPGW is a type of cable/ wire used in transmission lines construction. Additionally, OPGW replacing earth wires expected to create backbone for intercountry high-capacity data transmission across all transmission networks.
High ampacity conductors	These conductors are designed to carry a large amount of current without significant voltage drop or overheating. They typically have larger cross-sectional area, which reduces resistance and allows them to carry higher currents safely.
AL-59 alloy conductors	These are alloy conductors of Aluminium + Magnesium + Silica Alloy type. They have high conductivity and hence have less DC resistance and high current carrying capacity.
HPC - High Performance conductors	High Performance Conductor (HPC) is stranded with combination of annealed aluminium or aluminium alloy wires for conductivity and reinforced by core wires. High Performance Conductors are capable of continuous operation at temperatures in excess of 150ºC with stable electrical and mechanical properties.
HTLS – High Temperature Low Sag Conductors	HTLS are made from Aluminium Conductor Alloy Reinforced (ACAR) or Aluminium Conductor Steel Reinforced (ACSR) which enhance their mechanical strength and thermal stability as these conductors are designed to operate at temperatures up to 250°C or higher making them ideal for high-voltage transmission lines.
TS Conductor	TS Conductors is an overhead transmission conductor designed for high-temperature operation (150°C to 250°C) while maintaining significantly lower sag, higher ampacity, and superior long-term mechanical performance

Source: Crisil Intelligence

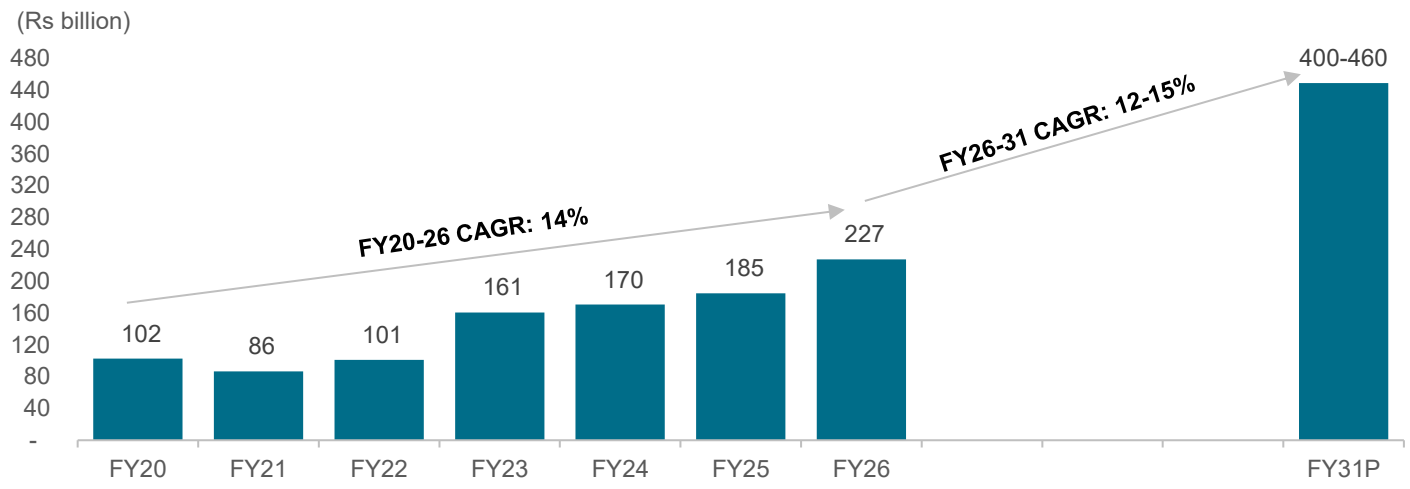
3.7 Overview of conductors

Market size of conductors to reach ~Rs 400-460 billion by FY31

In FY26, total market size of conductors reached Rs 227 billion up from Rs 102 billion in FY20, registering a CAGR growth of 14%. Major factors influencing this demand include railway electrification, reconductoring, healthy transmission line additions, etc.

Moving forward, Crisil Intelligence expects conductor industry to grow at a CAGR of ~12-15% from FY26-31 due to ongoing government schemes in power segment as well increased exports of conductors from India.

Market size: Conductors



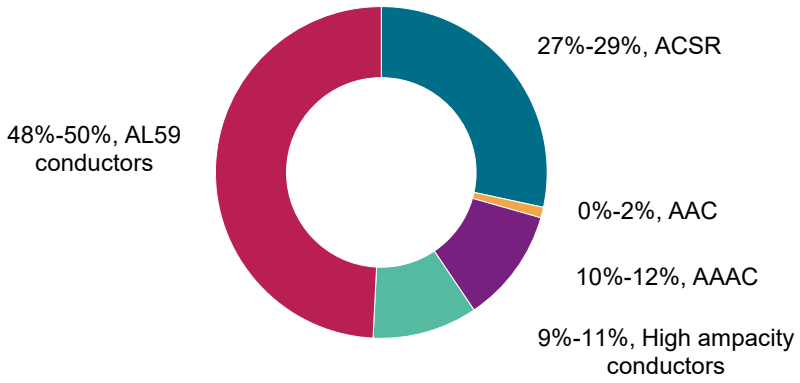
Note: P - Projected

Source: IEEMA, Crisil Intelligence

AL59 conductors had the most share of 48-50% in the conductors' market in FY26

The conductor's market in India is dominated by AL59 conductor which accounts for a share of 48-50% and are increasingly preferred for their superior conductivity and better corrosion resistance, making them ideal for coastal and high-load regions. The demand for AL59 conductors is further supported by their higher current carrying capacity compared to ACSR, along with improved resistance to thermal expansion, which makes them suitable for long-span transmission. In addition, the market is witnessing a notable rise in the adoption of advanced conductors including high ampacity types which had a share of 9-11%. Meanwhile, ACSR, AAAC and AAC had a share of 27-29%, 10-12% and 0-2% respectively reflecting a shift towards more efficient power transmission solutions.

Segment wise share of conductors (FY26)



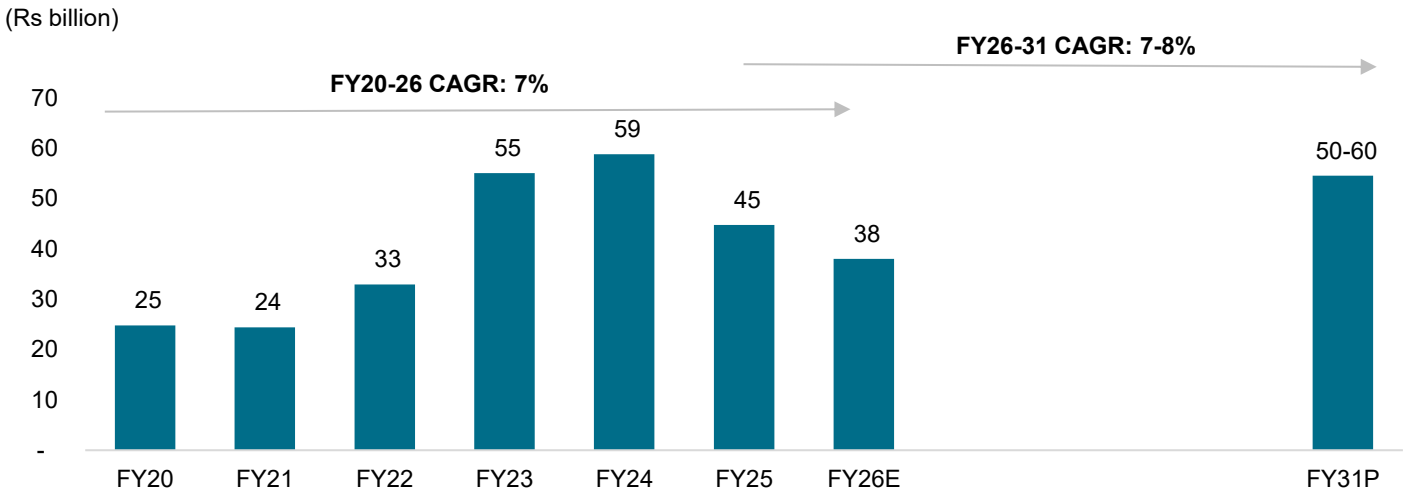
Source: IEEMA, Crisil Intelligence

Conductors export grew at a CAGR of 7% in value between FY20-26

The export demand of power conductors has grown at a CAGR of 7% between FY20-26 and reached Rs ~38 billion in FY26 from Rs 25 billion in FY20 due to increased international demand.

Furthermore, multilateral organizations such as the World Bank and International Bank for Reconstruction and Development (IBRD), are actively involved in funding various power transmission projects in regions including Africa, Central Asia, South, and East Asia, which are further expected to boost the exports of power conductors.

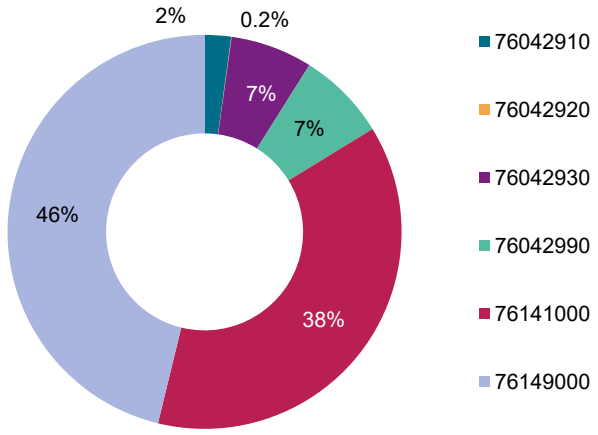
Export value of conductors



Note: Crisil Intelligence has considered following HSN codes for the analysis of conductor's exports from India- 76042910, 76042920, 76042930, 76042990, 76141000, 76149000. These include hard drawn bare Aluminium conductors steel re-in forced, wire rods, stranded wires, cables with steel core, etc.

Source: Ministry of Commerce & Industry, Crisil Intelligence

HS code wise share of export of conductors for FY26



Export Code	Description
76042910	HRD DRWN BARE ALMNM CONDCTRS STL RE-INFRCD
76042920	OTHER WIRE RODS
76042930	OTHER BARS AND RODS, OTHER THAN WIRE RODS
76042990	OTHR BARS, RODS PROFILS OF ALMN ALLOYS NES
76141000	STRANDED WIRE, CBLS ETC WTH STEEL COI
76149000	OTHR STRNDED WIRE, CBLS PLAITD BNDS ETC

Source: Ministry of Commerce & Industry, Crisil Intelligence

Country wise export value of Conductors for FY26

Number	Country	Share in Export (FY26)
1	United States of America (USA)	37%
2	Iraq	8%
3	Guyana	6%
4	Chile	5%

Number	Country	Share in Export (FY26)
5	Sweden	4%
6	Cameroon	3%
7	United Arab Emirates (UAE)	3%
8	United Kingdom (UK)	3%
9	Israel	2%
10	Nepal	2%
11	Others	27%

Source: Ministry of Commerce & Industry, Crisil Intelligence

The United States was the largest export destination for India's conductors in FY26, accounting for 37% of total exports. Iraq, Guyana, Chile, and Sweden were the next major export markets, contributing 8%, 6%, 5%, and 4%, respectively. Other notable destinations included Cameroon, the UAE, the UK, Israel, and Nepal, each accounting for 2–3% of exports. The remaining 27% of exports were distributed across other international markets, reflecting a diversified export base.

3.8 Conductors production stood at 654,038 MT in FY26

In FY23, conductors' production in India reached 419,653 MT. Newer technology conductors' entry in the market (high ampacity conductors and AL-59 conductors), drop in overall orders and the Covid-19 pandemic saw production of conductors drop between FY20-22.

Volumes recovered in FY23. Major factors contributing to this recovery included an overall upswing in exports, favourable government initiatives such as the REC and rural electrification initiatives fostering demand for conductors, and large planned capacity addition of renewable energy in the country, thereby providing an impetus to the growth of conductors' market in India. Additionally, infrastructure investments in Indian railways, Metros and High-speed rail are expected to grow exponentially, which will further boost the conductor industry. Consequently, the increasing thrust on high-voltage transmission lines will stimulate demand for high-voltage power conductors going ahead.

In FY26, production volume of conductors stood at 654,038 MT, compared to 454,805 in FY20 on the back of healthy demand.

Total production of conductors

Production	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY20-FY26 CAGR
Conductor volumes (in MT)	454,805	377,609	282,933	419,653	576,226	587,653	654,038	6.2%

Source: IEEMA, Crisil Intelligence

3.9 Processes involved in the manufacturing of cables and conductors

The manufacturing of cables and conductors is a complex process that involves several stages, each crucial to ensuring the final product meets the required performance standards. It begins with the selection of raw materials, where copper, aluminium, or steel are typically used for conductors due to their excellent conductivity and mechanical properties. These metals are drawn into wires through a process called wire drawing, where the material is pulled through a series of dies to reduce its diameter. The wires are then insulated using materials such as PVC, polyethylene, or rubber, depending on the application's specific needs. Insulation is applied through extrusion, where the polymer material is heated and moulded around the conductor. Afterwards the wires may undergo stranding, where multiple smaller wires are twisted together to form a larger, more flexible wire. In some cases, additional layers such as shields, or armouring are added for protection

against physical damage or electromagnetic interference. The cables are then tested for electrical and mechanical properties, ensuring they can withstand the intended environmental condition, such as temperature fluctuations, moisture, and external stress.

Quality control measures such as inspection for defects like kinks or insulation gaps, are strictly adhered to, ensuring that the final product is durable, reliable and safe for use in various applications.

Key aspects involved in the manufacturing of cables and conductors

- **Raw material Availability -** Copper, aluminum, and their alloys are commonly used as conductors, with their purity being critical to achieving optimal conductivity. Insulating materials such as PVC, Polyethylene, or rubber must meet specific criteria for durability, flexibility and thermal resistance. The availability, cost, and quality of these materials are pivotal to maintaining steady production and competitive pricing.
- **Design and Engineering -** The design process is central to meeting specific industry requirements. This involves determining cable types based on factors such as voltage capacity, flexibility and environmental exposure. Advanced computer-aided design and simulation software are often used to optimize performance and efficiency
- **Workforce Expertise and Training -** A highly skilled workforce is essential for the operation of sophisticated machinery, troubleshooting production issues, and ensuring quality control. Continuous training is necessary to keep employees updated on the latest manufacturing technologies and safety standards.
- **Packaging and Distribution -** After production, cables are carefully wound onto drums or reels, labelled, and packaged for transport. Packaging must prevent damage to the product during the handling and transportation, particularly for long-distance shipments. Cables are often bundled or coiled in specific configurations to make them easier to store and deploy at the usage point.

3.10 Key growth initiatives for power conductor and cables

Favourable government schemes and steps to address key issues to aid demand of cables and conductors

The government's effort to address key issues in the power sector, particularly in resolving supply bottlenecks affecting stressed assets are poised to increase the demand of power transmission equipment's like conductors as well as cables. Initiatives such as SHAKTI, stressed asset resolution, etc. are expected to increase the overall efficiency. Additionally, as these distressed assets are brought back to online and operational efficiencies restored, there may be additional requirements for upgrading and modernizing the transmission infrastructure which will involve deployment of transmission equipment like conductors and cables to ensure efficient and reliable power transmission across the grid.

Some of the schemes/policies expected to contribute to the power sector are mentioned in the table below.

Select government initiatives/ schemes related to power sector

Government initiatives	Description
Policies aimed at alleviating stress on account of non-availability of domestic coal	In May 2025, the Government approved a revised version of the SHAKTI (Scheme for Harnessing and Allocating Koyala Transparently in India) Policy to simplify coal allocation and improve fuel availability for the power sector. The revised framework consolidates multiple coal linkage mechanisms into two allocation windows, promoting ease of doing business, greater competition, efficient utilization of thermal power capacity, and affordable electricity generation.
Stressed asset resolution makes further headway as IBC resumes post-pandemic	Large capacity additions without PPAs with distribution companies (discoms), lack of firm fuel supply and weak financials of discoms resulting in inability to pay generators, regulatory

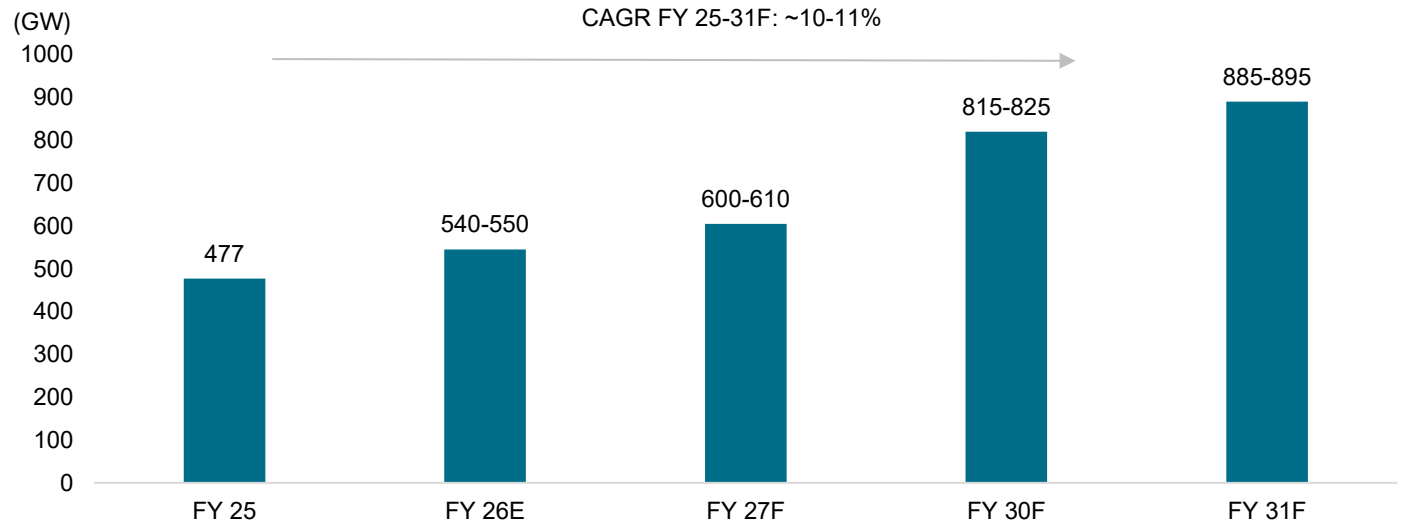
Government initiatives	Description
	challenges, weak financials of promoters, and delays in project execution have led to a large part of the private sector generation capacity reeling under financial stress. Since the enactment of the Insolvency and Bankruptcy Code, 2016 (IBC), on May 28, 2016, stressed thermal power assets started seeing steady traction even as the law went through procedural amendments.
Developments in transmission and distribution segment will support generation segment	As per the National Electricity Plan (Volume-II Transmission), the transmission network is planned to expand from about 5.04 lakh circuit km (as on February 2026) to 6.48 lakh circuit km by 2032, and transformation capacity from about 1429 GVA to 2345 GVA. Inter-regional transmission capacity is also planned to increase from 120 GW (as on February 2026) to 143 GW by 2027 and further to 168 GW by 2032. Strengthening and expanding the regional and intra-state grids, along with improved rural electrification, is also likely to ease the grid congestion issues and supply constraints, benefiting power generators

Source: Crisil Intelligence

India's Installed capacity to reach 885-895 GW mark by fiscal 2031

By fiscal 2031, RE capacity is expected to account for 52-57% of the installed base of 885-895 GW. As the country shifts its focus away from fossil generation, coal's share in the installed base is estimated to decline to 25-35% by fiscal 2031 from 35-40% in fiscal 2027. Other fossil fuels (including lignite, gas, and diesel) are expected to remain stagnant due to negligible capacity additions. Inclusion of hydro and nuclear power in non-fossil energy, as compared with coal plants, is expected to provide a fillip to non-fossil capacity (RE, nuclear, hydro and storage), taking it to ~600 GW by fiscal 2031. Crisil Intelligence estimates India will achieve its Panchamrit target of reaching 500 GW non-fossil energy capacity by 2030, as the estimated installed non-fossil capacity will reach 530-540 GW by fiscal 2030. Growing need for energy storage systems is expected to further drive capacity additions of PSP and BESS over the next five years. Storage installed capacity, which includes PSP and BESS, is expected to reach 50-55 GW by fiscal 2031.

India's Installed capacity



Note: F – Forecasted

Source: Crisil Intelligence

Growing demand of cables and wires from building segment

The building and construction sector is largely dominated by investments in the residential real estate space with a share of ~90% as of fiscal 2026. Over long-term investment in building & construction is projected to increase at an average annual rate of 3-5% between fiscal years 2027 and 2031, in line with the growth in residential demand.

India's residential real estate market has demonstrated strong resilience, benefiting from regulatory reforms such as the Real Estate (Regulation and Development) Act (RERA), which has enhanced transparency, improved governance standards, and strengthened homebuyer confidence. Rising urbanization, ongoing infrastructure development, increasing disposable incomes, and stable end-user demand continue to support sector growth.

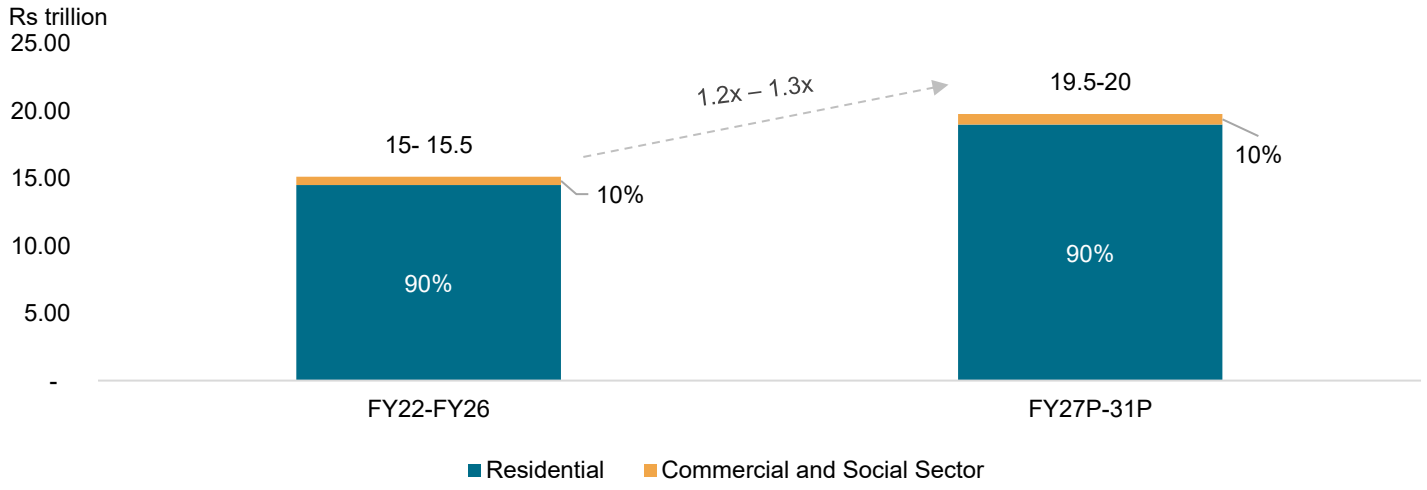
Developers remain actively engaged in launching new projects, with a notable shift towards premium and mid-income housing segments. However, housing affordability remains a key challenge due to escalating land prices and higher construction costs. Consequently, industry stakeholders continue to advocate for policy interventions aimed at expanding affordable housing supply and improving homeownership accessibility.

Pradhan Mantri Awas Yojana–Urban (PMAY-U) has seen a significant rise in government support, with budget allocations increasing from Rs 41750 million in 2015–16 to Rs 18,6250.5 million in 2026–27, marking a growth of about 346.1%. The scheme has substantially improved urban housing delivery, with over 98.10 lakh houses completed between 2015 and 2026, compared to 8.04 lakh houses completed during 2005–2014. As of May 2026, around 1.25 crore houses have been sanctioned under the scheme, involving a total investment of ₹8.77 lakh crore, while ₹59,318 crore has been disbursed as interest subsidy through the Credit-Linked Subsidy Scheme (CLSS). Additionally, nearly 96% of houses under PMAY-U 2.0 are registered in the name of a woman, highlighting the scheme's focus on women's empowerment.

Similarly, Pradhan Mantri Awas Yojana–Gramin (PMAY-G) has witnessed a remarkable increase in budgetary support, with allocations rising from Rs 210 million in 2015–16 to Rs 549,167 million in 2026–27, reflecting an extraordinary increase of approximately 2.61 lakh percent and underscoring the government's continued commitment to rural housing development and housing-for-all objectives.

Supported by favourable demographics, policy reforms, urban migration trends, and government-led housing initiatives, capital expenditure in the Building & Construction sector is expected to expand by approximately 1.2x–1.3x over the coming years. Overall, the sector is well-positioned for stable long-term growth, underpinned by stronger market fundamentals and improving consumer confidence.

Share of major segments building construction spending (%)



Note: P: Projected

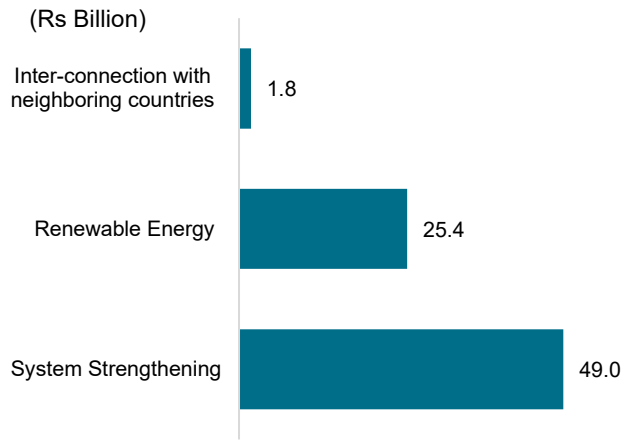
Source: Crisil Intelligence

Power Grid Corporation of India Limited (PGCIL) outlay towards transmission investment

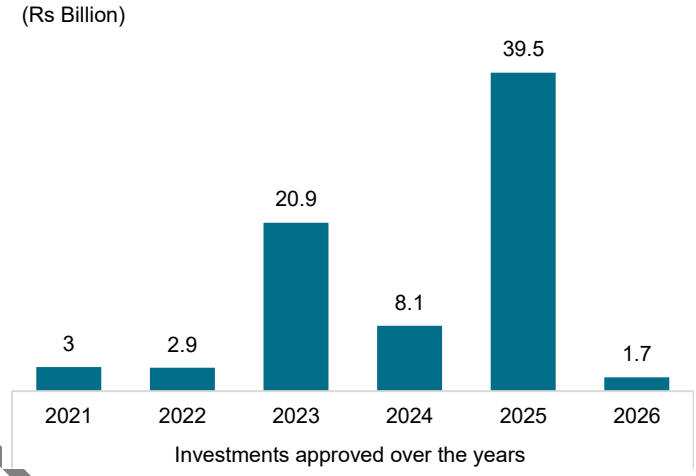
As of March 2026, PGCIL had approved projects worth ~Rs 241 billion since 2019, of which projects to the tune ~Rs 76.2 billion are currently under execution. This will translate into equipment and EPC ordering from PGCIL over the coming years. These projects comprise of interstate plans, both under GEC and routine system strengthening undertaken by PGCIL. Further, while TBCB is available as a mode for bidding and private participation, projects of urgency and national importance are by default awarded to PGCIL, furthering the entity's investment portfolio.

Renewable integration and system strengthening remain key areas of investment for PGCIL

Renewable integration and system strengthening remain key areas of investment for PGCIL



PGCIL projects to the tune of ~Rs 76 billion underway



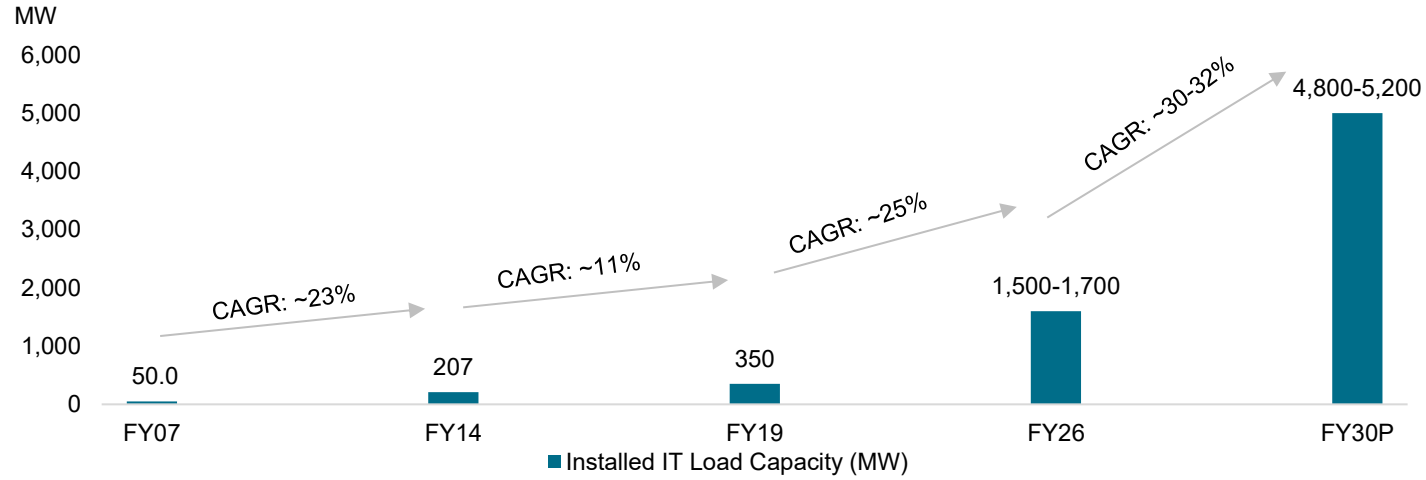
Source: PGCIL, Crisil Intelligence

Renewable energy integration efforts account for ~34% of PGCIL projects currently under execution, while system strengthening continues to remain mainstay of PGCIL tasks, contributing towards 63% of its investment outlay. PGCIL is also involved in strengthening transmission connections with neighbouring countries, with Rs 1.8 billion (or ~2% of its ongoing execution).

India Datacentre Capacity to grow at a CAGR of 30-32% by FY30

The rapid growth of the data center industry is primarily driven by the exponential increase in data consumption, fueled by the widespread adoption of advanced technologies such as 5G, cloud computing, and artificial intelligence. As a result, data centers have become a vital component of a country's digital infrastructure, providing a secure and efficient means of storing and managing vast amounts of data. On a global scale, the data center market has experienced significant expansion, driven by the booming digital economy and the rising use of AI. This momentum is also evident in India, where the installed data center capacity has more than tripled since 2019, reaching approximately 1,250-1,350 MW by fiscal 2025, with projections to reach 4,800-5,200 MW by fiscal 2030 (~3.4GW will be capacity addition). Mumbai has established itself as a leading data center hub in India and the Asia-Pacific region, with other cities such as Chennai, Delhi NCR, and Hyderabad rapidly expanding their presence. Kolkata is also witnessing increased activity, driven by the development of a new cable landing station.

Data centre capacity in India -In MW (fiscal 2007-30P)



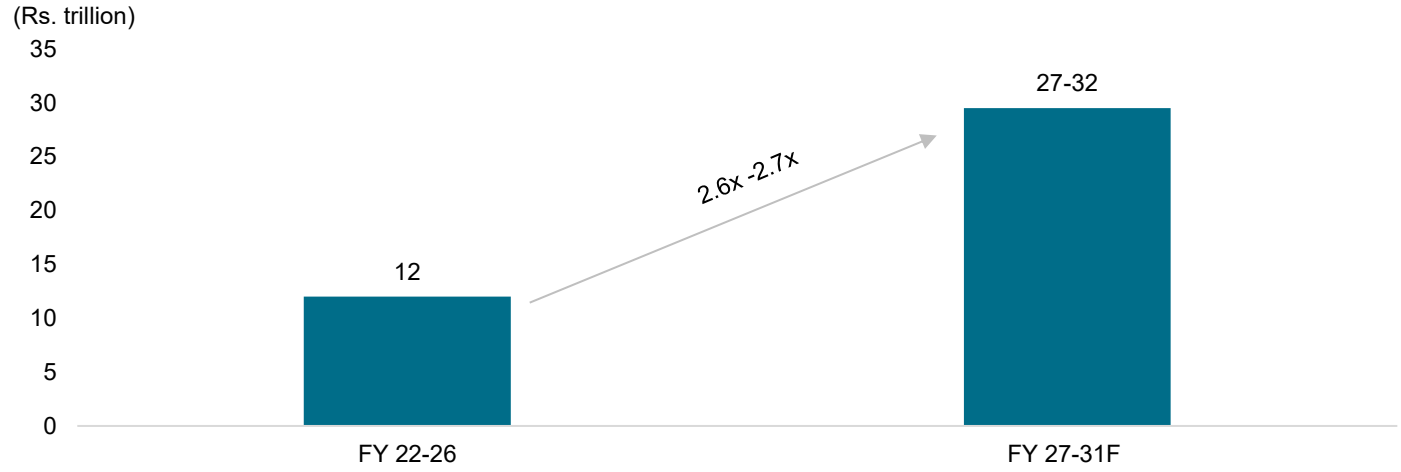
Note: E – Estimated P – Projected

Source: Crisil Intelligence.

Investments in generation to be driven by RE capacity additions between fiscal 2027-2031

Over the next five years, investments in generation will be led by renewable energy (excluding hydro and storage) capacity additions, followed by investments in conventional generation, indicating a shift in investment flow towards enhancing clean energy supply. Capacity addition from RE sources is expected to be 260-270 GW over fiscals 2027 to 2031, and 35-40 GW from coal-based plants sources over the same period. Investments in RE capacity (excluding hydro and storage), will constitute 52-57% of overall generation investments. Total generation investments are expected to grow ~2.6 x to 2.7x over fiscals 2027 to 2031 compared with fiscals 2022 to 2026

Outlook on power generation segment investments (fiscal 2022-2026 vs fiscal 2027-2031)



Source: Crisil Intelligence

Increased renewable energy (RE) capacity addition

India's installed power generation capacity reached approximately 520 GW as of January 2026. Of this, coal-based power plants accounted for around 221 GW, representing about 42.4% of the total installed capacity, while renewable energy sources, including solar, wind, and other non-fossil technologies, contributed approximately 263 GW, or 50.6% of the

capacity mix. The country's installed generation capacity has grown significantly from 382 GW in fiscal 2021 to 475 GW in fiscal 2025, largely driven by robust additions in renewable energy capacity, including solar, wind, hybrid, and other renewable technologies, even as capacity additions in coal and other conventional fuels moderated compared with previous years.

Looking ahead, renewable energy is expected to play an increasingly dominant role in India's power sector. Renewable energy capacity is projected to account for 42–47% of total installed power capacity by fiscal 2027, up from 40–42% in fiscal 2026 and 27% in fiscal 2022. In contrast, coal-based capacity is expected to decline to 35–40% of the installed base by fiscal 2027, compared with 40–45% in fiscal 2026 and 51% in fiscal 2022, reflecting the country's gradual transition away from fossil-fuel-based power generation.

Strong renewable capacity additions are expected to continue through fiscals 2027–2031, taking the renewable installed base to approximately 480–490 GW by fiscal 2031. Consequently, renewable energy is projected to account for 52–57% of India's total installed generation capacity, which is estimated to reach 885–895 GW by fiscal 2031. Over the same period, coal's share of the installed capacity mix is expected to decline further to 25–35%, while capacity based on other fossil fuels, including lignite, gas, and diesel, is likely to remain largely unchanged due to limited new additions.

The inclusion of hydro and nuclear power within the non-fossil energy category is expected to further strengthen India's clean energy portfolio, with total non-fossil capacity—including renewable energy, hydro, nuclear, and storage—projected to reach around 600 GW by fiscal 2031. India is also expected to achieve its Panchamrit target of 500 GW of non-fossil energy capacity by 2030, with installed non-fossil capacity estimated at 530–540 GW by fiscal 2030. In addition, the growing need for grid flexibility and renewable energy integration is expected to drive significant investments in energy storage solutions. Installed storage capacity, comprising Pumped Storage Projects (PSP) and Battery Energy Storage Systems (BESS), is projected to reach 50–55 GW by fiscal 2031, supporting the reliability and stability of an increasingly renewable-powered grid.

Additionally, the Government of India has implemented a range of measures and initiatives aimed at promoting and accelerating renewable energy capacity across the nation, with an ambitious target of achieving 500 GW of installed electric capacity from non-fossil sources by 2030. Key programs are as follows:

Growth driver	Description and reasoning
PM-Kusum	Prime Minister introduced the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM-KUSUM) Scheme, aiming to ensure energy and water security for farmers, increase their income, and reduce the farm sector's dependence on diesel, thereby decreasing environmental pollution. PM-KUSUM is a demand-driven scheme under which capacities are allocated based on the requirements raised by states and the progress achieved in implementation, while beneficiary selection and execution are carried out by the respective State Implementing Agencies (SIAs). Prime Minister introduced the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM-KUSUM) Scheme, aiming to ensure energy and water security for farmers, increase their income, and reduce the farm sector's dependence on diesel, thereby decreasing environmental pollution. The Scheme offers a central government subsidy of up to 30% or 50% of the total cost for installing standalone solar pumps and solarizing existing grid connected agricultural pumps. Additionally, farmers can set up grid connected solar power plants of up to 2MW on their unused land and sell excess electricity to local power distribution companies (DISCOMs) at a state-regulated tariff. The Scheme is being implemented by state government departments and targets the addition of 34,800 MW of solar capacity by March 2026, with a total central financial allocation of Rs 344.2 billion. As of 31 December 2025, the scheme has made significant progress across all components. Under Component-A, solar power plants with a capacity of 720.91 MW have been installed against a sanctioned target of 10,000 MW. Under Component-B, 9.75 lakh standalone solar pumps have been installed out of 13.15 lakh sanctioned pumps, creating an installed capacity of 4,398.57 MW. Similarly, under Component-C, 12.02 lakh agricultural pumps have been solarised out of 35.83 lakh sanctioned pumps, resulting in an installed

Growth driver	Description and reasoning
	capacity of 5,829.98 MW. Overall, the scheme has benefited 21.77 lakh farmers across the country. To accelerate implementation and improve ease of adoption, the Ministry issued comprehensive revised guidelines on 17 January 2024, simplifying procedures and strengthening the framework for financial assistance under the scheme, thereby supporting greater use of solar energy in the agricultural sector.
National Green Hydrogen Mission	National green hydrogen mission aims to make India the Global Hub for production, usage and export of Green Hydrogen and its derivatives which will contribute to India's aim to become Aatmanirbhar through clean energy. The Mission aims to lead to significant decarbonisation of the economy, reduced dependence on fossil fuel imports, and enable India to assume technology and market leadership in Green Hydrogen. The Mission will identify and develop regions capable of supporting large scale production and/or utilization of Hydrogen as Green Hydrogen Hubs. In the initial stage, two distinct financial incentive mechanisms proposed with an outlay of Rs. 1,749.0 billion up to 2029-30: • Incentive for manufacturing of electrolysers • Incentive for production of green hydrogen.
PM Surya Ghar	PM Surya Ghar: Muft Bijli Yojana, launched in February 2024, aims to provide rooftop solar systems to one crore households by FY 2026–27. As of 19 March 2026, the scheme has enabled the installation of 26.2 lakh rooftop solar systems and disbursed ₹17,967.53 crore in Central Financial Assistance to beneficiaries. The scheme features a fully digital application-to-subsidy process through the National Portal, with subsidy disbursal typically completed within 15 days of the redemption request. To accelerate adoption, the government has simplified approvals, waived technical feasibility requirements in certain cases, and streamlined net-metering procedures in coordination with DISCOMs.
PLI schemes for solar PV Modules	Ministry of New and Renewable Energy, Government of India is implementing the Production Linked Incentive (PLI) Scheme for National Programme on High Efficiency Solar PV Modules, for achieving manufacturing capacity of Giga Watt (GW) scale in High Efficiency Solar PV modules with outlay of Rs. 240,000 million. This Scheme has provision for Production Linked Incentive (PLI) to the selected solar PV module manufacturers for five years post commissioning, on manufacture and sale of High Efficiency Solar PV modules. The scheme aims to build an ecosystem for manufacturing of high efficiency solar PV modules in India and thus reduce import dependence in the area of Renewable Energy.

Source: Crisil Intelligence

Such multifold generation expansion plans also require large-scale development in the transmission sector because grid-connected solar and wind plants are usually located in far-flung areas which have limited transmission infrastructure. Extensive transmission and cable infrastructure transmit power from remote generation sites to consumption centres. This, in turn, is expected to drive the demand of cables and conductors.

Growing focus on floating solar projects

Floating solar projects, also known as floating photovoltaic are solar power installations mounted on floating structures on water bodies such as lakes, reservoirs, ponds, rivers, coastal areas etc. floating solar has a number of advantages over conventional solar plants such as it does not require additional land acquisition and can be installed in densely populated areas, Floating solar not only utilizes the unused water surface but also enhances the efficiency of the solar panels by cooling it, thereby reducing losses from evaporation and conserving water.

As focus shifts towards Floating solar projects, the demand for cables used in this industry is also expected to see an uptick, floating solar projects mainly uses rubber cables as the wires must withstand harsh environmental conditions such as inclement weather, corrosion and cold environments. Additionally, the cables must also be mechanically strong, torsion resistant, UV resistant and abrasion resistant.

As per world bank, India boasts potential capacities of 280-300 GW in floating solar power. However, only a small fraction of it has been installed in states such as West Bengal, Kerala, Andhra Pradesh, Madhya Pradesh, Kerala, Bihar, Telangana and Rajasthan.

Some of the floating solar projects in India are:

Plant	Capacity	Description
NTPC Ramagundam Floating Solar PV Park, Telangana	100MW	Spread over an area of 600 acres, the project generates 223,000 MWh electricity every year
NTPC Kayamkulam Floating Solar Power Plant, Kerala	92MW	Spread across a 350-acre water body, the project generates 167,150 MWh electricity every year
NTPC Simhadri Floating Solar PV project	25MW	Spread over an area of 150 acres, the project power 7,000 households

Source: Crisil Intelligence

Growing shift towards high temperature low sag (HTLS) conductors

Crisil Intelligence expects a pickup in demand for high-voltage conductors, given increasing focus on adding transmission lines of higher voltage levels, for evacuation of bulk power. Also, the importance of high-voltage (HV) lines of 400 kV and 765 kV in the intra-state transmission network is also increasing, as higher voltage level enhances power density, reduces losses and efficiently delivers bulk power. In addition to increase in voltage levels, high efficiency conductors (the one which can carry more current compared to conventional conductor) will also see increased usage. Moreover, it reduces requirement of right-of-way, a key challenge facing the transmission sector. Consequently, the increasing thrust on high-voltage transmission lines will stimulate demand for high-voltage power conductors going ahead. Also, as electric consumption in urban areas goes higher, there is a need for higher ampacity transmission lines through limited ROW-HTLS conductors and reconducting turnkey solutions.

Renewable integration through Green Energy Corridor (GEC) to lead to growth in the high voltage segments

India's energy transition is expected to be a significant growth driver for the high-voltage (HV) transmission and distribution ecosystem. The Government has planned transmission infrastructure capable of integrating more than 500 GW of non-fossil fuel capacity by 2030 and over 600 GW by 2032, supported by the expansion of the Green Energy Corridor (GEC) network and the Inter-State Transmission System (ISTS). Under the National Electricity Plan (Transmission), the country's transmission network is projected to expand to 6.48 lakh circuit kilometres (220 kV and above), with transformation capacity increasing to 2,345 GVA by 2031-32 and inter-regional transfer capacity rising from 120 GW to 168 GW. Such large-scale grid expansion will require substantial deployment of high-voltage conductors, extra-high-voltage (EHV) and ultra-high-voltage (UHV) cables, transmission towers, substations, switchgear, and reactive power compensation equipment.

The Green Energy Corridor programme has emerged as a key enabler of renewable energy integration. GEC-I and GEC-II are being implemented across ten states to facilitate the evacuation of 44 GW of renewable energy capacity, of which around 26 GW has already been integrated, while GEC-III is under consideration for further large-scale renewable connectivity. In parallel, transmission systems are being developed for integrating approximately 207 GW of upcoming solar and wind capacity, along with additional hydro, battery storage, and pumped storage projects. The increasing deployment of renewable energy projects in remote resource-rich regions such as Rajasthan, Gujarat, Karnataka, Tamil Nadu, and Andhra Pradesh necessitates the construction of long-distance high-voltage transmission corridors, creating sustained demand for aluminium conductors, HTLS conductors, XLPE power cables, underground transmission systems, grid substations, and related electrical infrastructure.

Railway, Metro and High-Speed Rail Electrification

Indian Railways has achieved a landmark milestone under its Mission 100% Electrification, with 69,427 route kilometres (RKMs), or 99.2% of the 70,001 RKM Broad Gauge network, electrified as of November 2025. The pace of electrification

has accelerated dramatically over the past decade, rising from about 1.42 km per day during 2004–2014 to more than 15 km per day during 2019–2025. Electrification now covers almost the entire national rail network, placing India among the world's most extensively electrified railway systems. Only 574 RKMs (0.8%) remain to be electrified across a handful of states, indicating that Indian Railways is in the final phase of achieving complete broad-gauge electrification. This transition is delivering significant benefits in terms of lower operating costs, improved energy efficiency, reduced dependence on imported fossil fuels, and lower carbon emissions.

Beyond track electrification, Indian Railways is increasingly integrating renewable energy and grid-connected power infrastructure into its operations. Solar power capacity across the railway network has expanded to 898 MW, with around 70% utilized for traction requirements, and further renewable energy additions are planned. This transition will require deployment of solar cables, medium- and high-voltage power cables, transmission conductors, substation equipment, and related electrical systems.

Operational metro and RRTS networks have expanded from 248 km in 2014 to over 1,095 km in 2025, supported by cumulative sanctioned investments of approximately Rs 3.44 trillion. In parallel, the 508-km Mumbai-Ahmedabad High-Speed Rail corridor is under development with extensive electrification infrastructure, including over 20,000 OHE masts and a 2×25 kV traction system. Beyond this project, seven additional high-speed rail corridors spanning nearly 4,000 km have been identified, representing a potential investment opportunity of around Rs 16 trillion.

The expansion of metro, RRTS and high-speed rail networks is expected to drive demand for conductors across traction electrification systems. Overhead electrification (OHE) networks require copper and aluminium conductors for contact wires, catenary systems, feeder lines, traction substations and power distribution infrastructure.

State transmission line additions up after pandemic

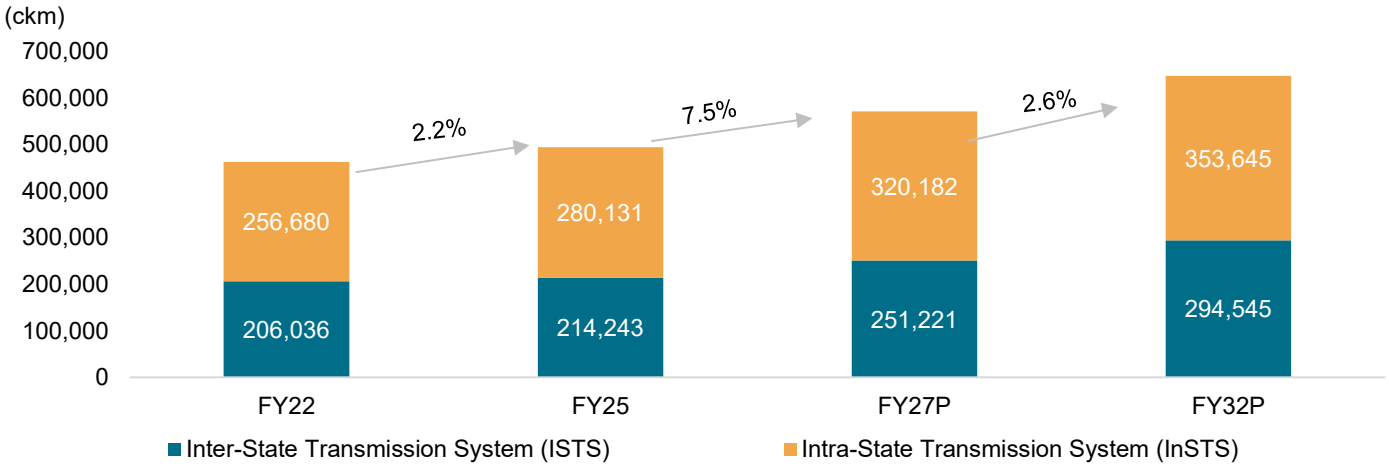
The Central Electricity Authority (CEA) has released the National Electricity Plan (NEP) (Volume II: Transmission), which outlines the development of the transmission system from 2017-2022 and provides a roadmap for 2022-2027, with a perspective on 2027-2032. The NEP 2.0 is the Government of India’s strategic framework aimed at achieving universal and sustainable electricity access, particularly across rural, remote, and underserved regions. NEP 2.0 is in alignment with broader missions like Powering Bharat 2.0, RDSS, and Energy for All, NEP 2.0 is critical to realizing India’s vision of energy equity, economic empowerment, and climate-resilient infrastructure. It also supports government of India’s ambition of becoming a $5 trillion economy by ensuring that every citizen and enterprise has access to dependable and affordable electricity. The plan is based on projected peak electricity demand and anticipated generation capacity additions. Key highlights include:

Category	FY 27	FY 32	Growth (2027-2032)
Transmission line capacity	571,403 ckm	648,190 ckm	13.4%
Substation capacity	1,881,780 MVA	2,411,885 MVA	28.2%

Note: MVA: Mega Volt-Amperes, ckm: Circuit Kilometres

Source: Central Electricity Authority, Crisil Intelligence

Total transmission line capacity outlined as per NEP

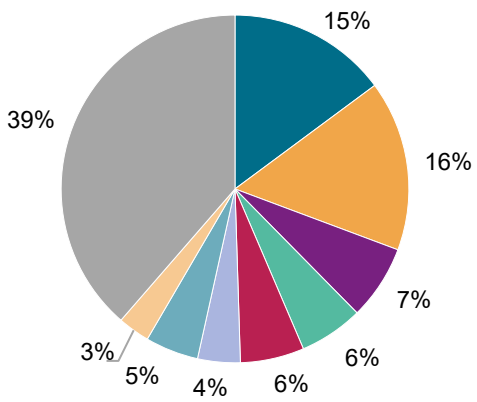


Source: CEA, Crisil Intelligence

To achieve the targeted 500 GW RE capacity by 2030, the central government has proposed an additional 63,502 ckm of transmission lines under intrastate transmission (InSTS) by 2027 on top of the existing 256,680 ckm as of March 2022 leading to a total InSTS line of 320,182 ckm. The top 10 states (by InSTS transmission line additions) are expected to account for ~81% of the transmission line additions by 2027 under InSTS. Gujarat is expected to lead the way with nearly 16% share in expected additions followed by Uttar Pradesh (15%).

Between FY21 and FY25, India added a cumulative 69,303 ckm of transmission lines and 369,620 MVA of transformation capacity, reflecting continued investments in strengthening the national power transmission network. As electricity consumption across urban areas continues to increase, limited right-of-way (ROW) availability is driving demand for HTLS conductors and turnkey reconductoring solutions. Crisil Intelligence expect a pickup in demand for high-voltage conductors, given increasing focus on adding transmission lines of higher voltage levels, for evacuation of bulk power. Also, the importance of high-voltage (HV) lines of 400 kV and 765 kV in the intra-state transmission network is also increasing, as higher voltage level enhances power density, reduces losses and efficiently delivers bulk power.

Share of states in transmission lines addition over 2022-2027



Region-wise share in transmission line additions (2022-2027) as per NEP:

North Region: 29%

South Region: 22%

West Region: 32%

East Region: 17%

Uttar Pradesh | Gujarat | Tamil Nadu | Andhra Pradesh | Rajasthan | Telangana | Madhya Pradesh | Odisha | Others

Note: The data pertains to intra-state transmission line additions (ckm)

Source: CEA, Crisil Intelligence

Transport, Mobility and Charging Infrastructure Expansion

FASTag transactions grew from 243.5 million in FY22 to 478.2 million in FY26, delivering a CAGR of ~18.4%, while FASTag toll collections increased from Rs 380.7 billion in FY22 to Rs 823.4 billion in FY26, registering a CAGR of ~21.3%. This growth reflects higher digital toll adoption, increased highway usage, rising traffic volumes and broader electronic toll collection penetration, indicating continued expansion in the transportation and road infrastructure sector.

The rapid growth of India's electric vehicle ecosystem is expected to drive significant demand for cables, conductors, and charging infrastructure. Annual electric car sales are projected to more than double from ~220,000 units in FY26 to ~500,000 units by FY27, while the electric two-wheeler market is expected to grow by 21–23% in Fiscal 2027 after having grown by 23% in FY26. To support this transition, original equipment manufacturers (OEMs) are expected to invest around Rs 600 billion during FY27–FY28, with over 40% earmarked for EV portfolio expansion, localisation and production scale-up. Public charging points in India reached ~88k in CY2025, compared with over 7 million globally, including more than 4.7 million in China alone and about 230k in the United States. While India's public charging network expanded 15% in CY2025, global charging infrastructure grew by more than 33%, highlighting a slower pace of deployment. To support rising EV adoption, India is projected to expand its public charging network nearly 6x to over 520k charging points by CY2035, requiring a substantial acceleration in charging infrastructure investments. These developments represent cable-intensive expansion opportunities across vehicle manufacturing, charging infrastructure, and grid connectivity.

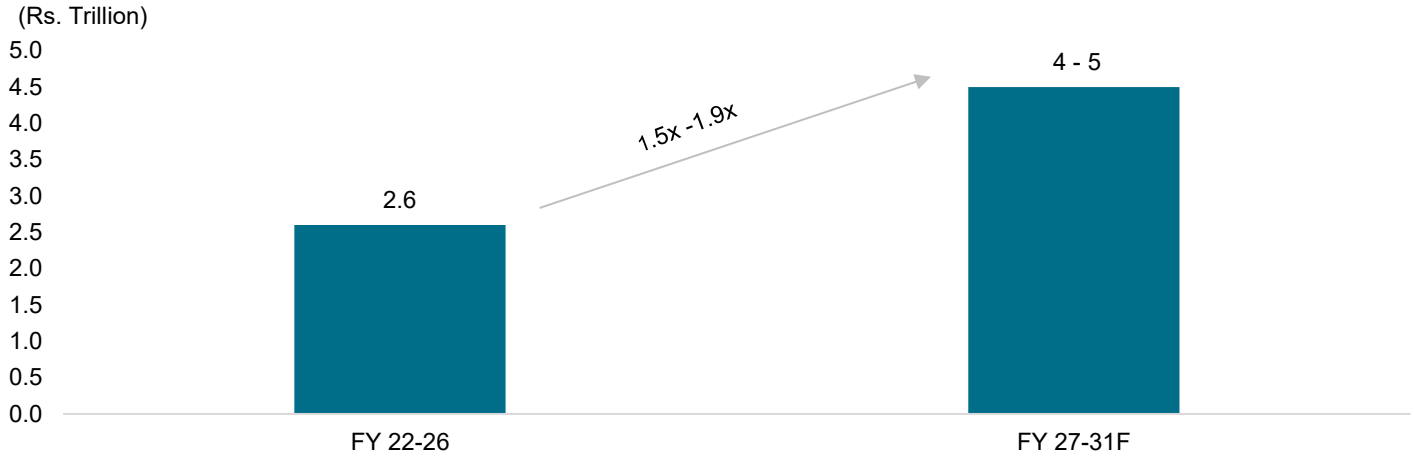
3.11 Overview of power transmission and distribution in India

Power transmission and distribution forms the backbone of India's energy sector, ensuring electricity reaches urban and rural consumers. The transmission system operates at high voltages and is managed by corporations which oversees the interstate network. India's grid is divided into five regional zones-Northern, Eastern, Western, Southern and North-Eastern, all unified into a single national grid ensuring efficient power flow and resource sharing. Distribution, handled by state electricity boards (SEBs) and private companies focusses on delivering electricity to end consumers. Below are the key pointers related to power transmission and distribution aiding demand growth of cables and conductors.

Investments in the transmission and distribution sector to boost demand for cables and wires Renewable energy evacuation, ISTS network expansion and upgradation to boost investment in transmission

To service a large generation installed base, the estimated investment in the transmission sector is expected to cumulatively reach Rs 4-5 trillion over fiscals 2027-2031. Investments in the sector are expected to be driven by the need for a robust and reliable transmission system to support continued generation additions and the strong push to the renewable energy sector as well as rural electrification. State transmission companies such as GETCO have allocated ~ 85% of its planned capital expenditure for new projects such as installation of EHV S/s & associated lines with downstream and 66 kV S/s with associated lines. The remaining 15% is allocated for repair and maintenance (R&M) and augmentation activities. State transmission companies and the state electricity commission look at several factors such as additional transmission system requirement from seasonal/quarterly load and generation variations that the state will face in the future to estimate investment required in the future. Delays in transmission projects are resulting in significant cost overruns, with capital expenditure exceeding initial forecasts. A case in point is Karnataka Power Transmission Company Limited (KPTCL), which saw a 34% increase in actual capital expenditure in fiscal 2024 compared to the estimated amount. The main contributors to this increase were Right of Way (RoW) issues and higher land acquisition costs, as well as rising material and labor costs due to revised IEEMA rates and CPI inflation.

Snapshot of outlook on transmission segment investments (fiscal 2022-2026 vs fiscal 2027-2031)



Note: F stands for forecast
Source: Crisil Intelligence

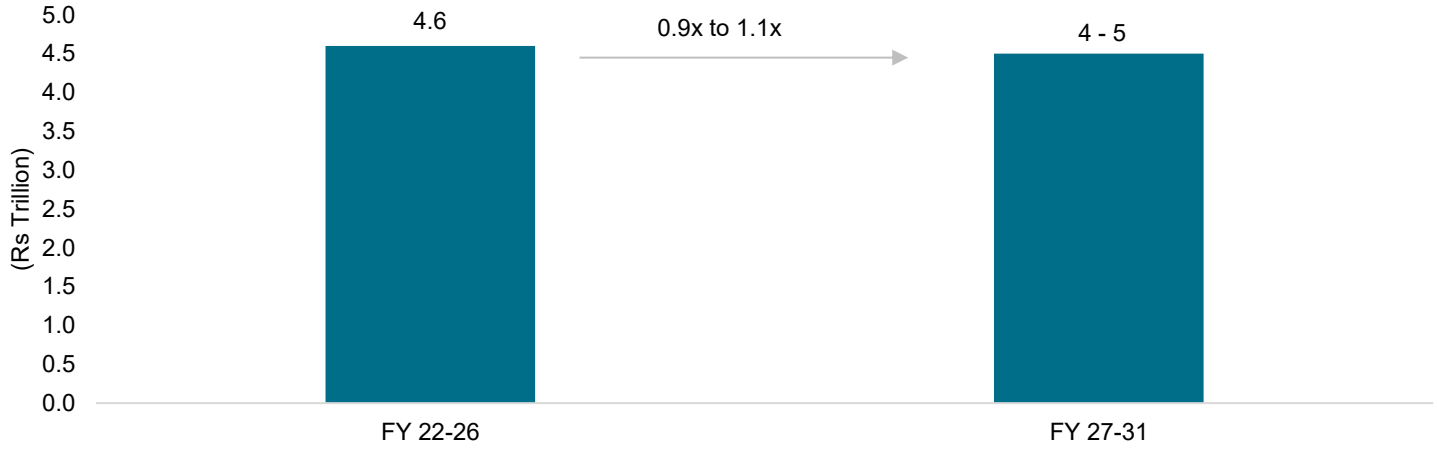
As capacity additions in the country are not evenly distributed geographically, few regions in the country will be in deficit and others in surplus. To cater to this, there will be need to import/export from/to regions. Several inter-regional transmission corridors have been planned, and some of these high-capacity transmission corridors are in various stages of implementation. Newly sanctioned projects under the North-Eastern System Strengthening Scheme and system strengthening schemes focused in the Ladakh region are also expected to augment investments in the transmission segment.

Distribution investments to be aided by Revamped Distribution Sector Scheme (RDSS) Spending

In the Union Budget 2021-22, the government announced the Revamped Distribution Sector Scheme worth Rs 3.04 trillion for state discoms, to be allocated over the next five years. Rs 2.52 trillion worth of DPRs have been sanctioned by nodal agencies (PFC and REC) as of December 2023. While the amount is sanctioned, disbursement under the scheme will be contingent upon work undertaken that was proposed under DPR. Fulfilment of the conditions, which primarily involve operational efficiency parameters, strengthening of distribution infrastructure, and regulatory compliance, will entail significant investments in the distribution segment.

Investments in the segment are likely to gradually pick up fiscal 2026 onwards with central / state government(s) expected to provide the required funding support. The distribution segment is expected to attract investments worth Rs 4-5 trillion over fiscals 2027 to 2031 vis-à-vis ~Rs 4.6 trillion between fiscal 2022-2026 led by the government's thrust on the Revamped Distribution Sector Scheme, improving access to electricity and providing 24x7 power to all.

Outlook on investments in distribution segment (fiscals 2027-2031)



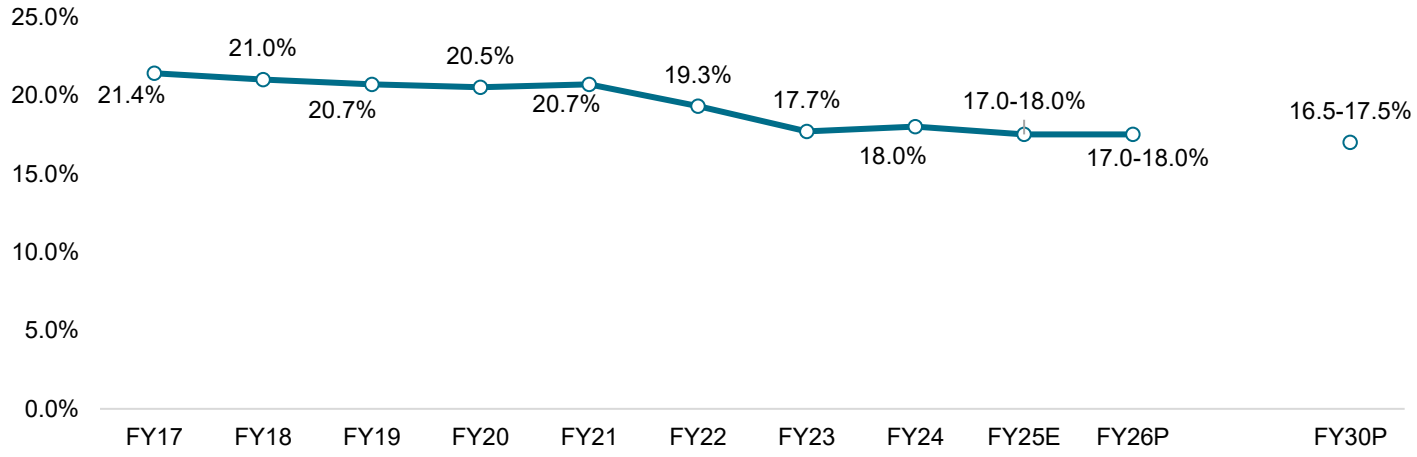
Note: FY27-31 is forecast
Above data only includes state power distribution companies
Source: Crisil Intelligence

Transmission & distribution (T&D) losses have been on a declining trajectory, to reduce further led by a host of infrastructural measures

The government has undertaken several initiatives to lessen the loss of Power Distribution Companies (DISCOMs) namely Revamped Distribution Sector Scheme which is a reform based and results linked scheme with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution Sector. The scheme aims to reduce the AT&C losses to pan-India levels of 12-15%.

Reduction of AT&C losses will require upgrade of the transmission and the distribution infrastructure, which will boast the demand of transmission and distribution equipment including conductors and cables.

T&D losses India



Note: P stands for Projected , E stands for Estimated
Source: CEA, Crisil Intelligence