

Assessment of infrastructure construction industry in India with focus on water and wastewater management

July 2026



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Macroeconomic assessment

Global GDP is projected to grow by 3.1% in CY26 and 3.2% in CY27

The April 2026 update to IMF's World Economic Outlook (WEO) report employs a scenario-based approach to present the forecast for CY26 and CY27. 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-CY26 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

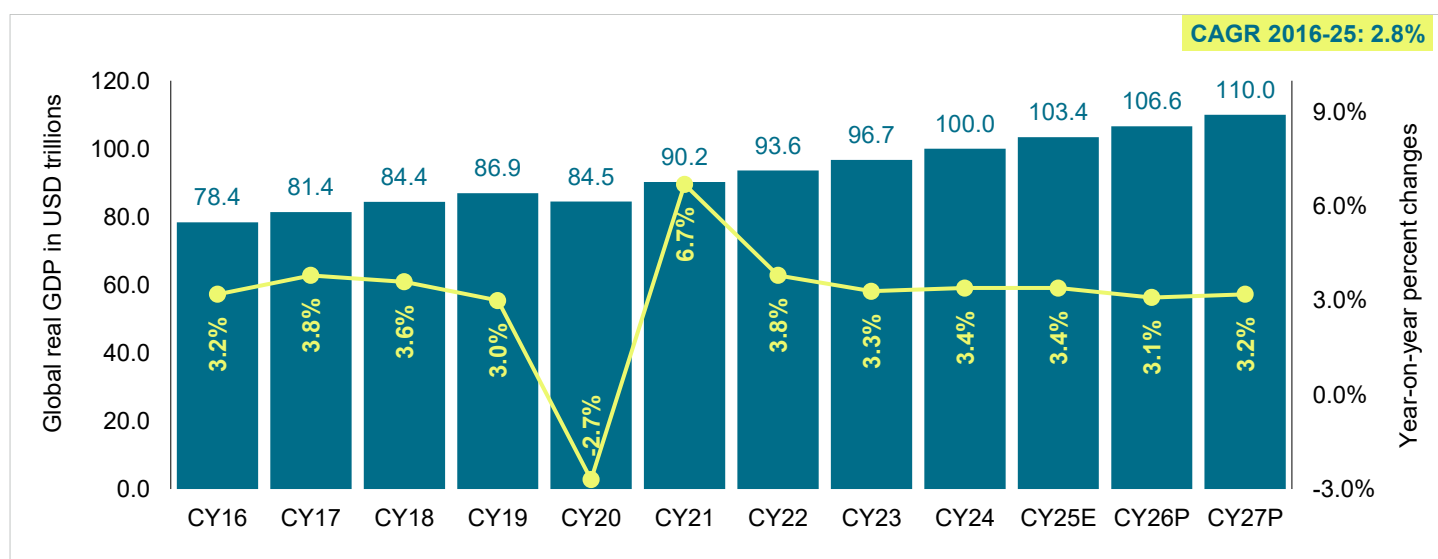
	Reference forecast	Adverse forecast	Severe forecast
Growth projection for global real GDP	3.1% in 2026 3.2% in 2027	2.5% in 2026 3.0% in 2027	2.0% in 2026 2.2% in 2027
Growth projection for global inflation	4.4% in 2026 3.7% in 2027	5.4% in 2026 3.9% in 2027	5.8% in 2026 6.1% in 2027

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 ME conflict would dissipate by mid-2026 which did not happen. Given the latest developments, severe scenario is most likely to play out.

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

As per IMF, most of the impact on growth in CY26 comes from higher energy prices, whereas most of the impact on growth in CY27 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 outturns at the end of CY25 and the first quarter of CY26. 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.

Among regions, Emerging & Developing Asia is the fastest growing

As per the IMF's WEO report (April, 2026) in which 197 economies from all geographies in the world are classified into two broad categories, i.e. Advanced Economies and Emerging Market & Developing Economies, the April 2026 update notes that the Middle East conflict will have varied impact on growth across regions given differential exposure—through geographic proximity, financial flows, remittances, and energy dependencies.

Advanced Economies

Advanced Economies represent 43 out of the total 197 economies. Real GDP growth for advanced economies is projected at 1.6% for 2026 and 1.7% for CY27, with a large negative effect expected only in some net energy-importing economies, such as the Euro area and the UK.

Economies considered under Advanced Economies

Advanced Economies					
Four major economies				Euro area	Other Advanced Economies
United States 	Japan 	United Kingdom 	Canada 	Includes 21 economies: Austria, Belgium, Bulgaria, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovak Republic, Slovenia, Spain	Includes 18 economies: Andorra, Australia, Czech Republic, Denmark, Hong Kong, Iceland, Israel, South Korea, Liechtenstein, Macao, New Zealand, Norway, Puerto Rico, San Marino, Singapore, Sweden, Switzerland, Taiwan

Source: IMF's World Economic Outlook – April 2026 Update, Crisil Intelligence

- United States:** The US economy is projected to grow by 2.3% in CY26, supported by its net-energy-exporter status, lagged impact of its monetary policy rate cuts, productivity growth, and the associated carryover from a rebound in activity in Q1 of CY26 compared with Q4 of CY25 despite the rise in trade barriers weighing on the level of activity. In CY27, the US economy is expected to grow by 2.1% supported by a near-term fiscal boost from tax incentives, with moderating levels of technology-driven momentum and gradually fading productivity growth.

- **Euro area:** Real GDP growth is expected at 1.1% in 2026 and 1.2% in CY27 as the impact of the planned increase in defense spending for most countries is likely to materialize in subsequent years because of commitments to reach target levels gradually by CY35. Additionally, given the Middle East conflict, the persistent rise in energy prices that began with Russia's invasion of Ukraine is expected to continue dragging on manufacturing.

Emerging Market and Developing Economies

Emerging Market and Developing Economies represent 154 out of the total 197 economies. GDP growth for Emerging Market and Developing Economies is expected to fall to 3.9% in CY26 but recover to 4.2% in CY27. For several South and Southeast Asian economies, disruptions resulting from the Middle East conflict are expected to shrink tourism and remittance inflows, which in turn, would weaken domestic demand.

- **China**

China's economy is projected to grow by 4.4% in CY26 due to the lower US effective tariff rates on Chinese goods, and stimulus measures offsetting the negative impact of the Middle East conflict. However, in CY27, growth of China's economy will drop to 4.0% as structural headwinds—including those from a grinding slowdown in the housing sector, a declining labour force, decreasing returns on investment, and slower productivity growth—assert themselves.

- **India**

According to the April update to IMF's WEO, India's economy was projected to expand by 6.5% in CY26 led by positive contributions from the carryover of the strong CY25 outturn and the decline in additional US tariffs on Indian goods from 50 to 10%, which outweigh the adverse impact of the Middle East conflict.

Economies considered under Emerging Market and Developing Economies

Emerging Market and Developing Economies

Emerging and Developing Asia			Emerging and Developing Europe	Latin America and the Caribbean	Middle East and Central Asia	Sub-Saharan Africa
China 	India 	28 other economies	Includes 14 economies	Includes 33 economies	Includes 32 economies	Includes 45 economies

Source: IMF's World Economic Outlook – April 2026 Update, Crisil Intelligence

Year-on-year real GDP growth of regional economies, CY2016-27P

Economies	Real GDP growth (year-on-year percent changes) as per IMF											
	Estimates										Projections	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
World	3.2%	3.8%	3.6%	3.0%	-2.7%	6.7%	3.8%	3.3%	3.4%	3.4%	3.1%	3.2%
Advanced Economies	1.8%	2.6%	2.3%	1.9%	-3.9%	6.1%	3.1%	1.7%	1.8%	1.9%	1.8%	1.7%
Emerging & Developing Asia	6.8%	6.6%	6.4%	5.4%	-0.5%	7.8%	4.7%	5.6%	5.4%	5.5%	4.9%	4.8%
Emerging & Developing Europe	1.7%	4.3%	3.7%	2.6%	-1.7%	7.2%	0.5%	3.6%	3.8%	2.0%	2.0%	2.1%
Latin America & the Caribbean	-0.8%	1.4%	1.1%	0.2%	-6.9%	7.5%	4.3%	2.3%	2.4%	2.4%	2.3%	2.7%
Middle East & Central Asia	4.1%	2.6%	2.5%	2.1%	-2.2%	4.7%	6.4%	2.6%	2.8%	3.6%	1.9%	4.6%
Sub-Saharan Africa	1.2%	2.8%	3.2%	3.0%	-3.1%	3.9%	4.4%	3.8%	4.2%	4.5%	4.3%	4.4%

Source: IMF's World Economic Outlook – April 2026 Update, Crisil Intelligence

India is among the world's fastest growing major economy

As per the April 2026 update to the IMF's WEO, the world's largest economies by nominal GDP are those of the US, China, Germany, Japan, the UK, India, France, Italy, Russia, and Brazil. Among these, India's economy has been the fastest growing through all the years since 2021, and as per IMF's projections, it is expected to sustain its lead in CY26 and CY27. In terms of size of the economy based on nominal GDP in current US dollars, India held the 5th rank in CY24 but slipped to the 6th rank in CY25 due to the depreciation of its domestic currency against the US dollar.

Year-on-year real GDP growth of the world's top 10 economies by nominal GDP in CY2025, CY2016-27P (except India)*

Top 10 economies by 2025 nominal GDP		Real GDP growth (year-on-year percent changes) as per IMF											
		Estimates										Projections	
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	US	1.8%	2.5%	3.0%	2.6%	-2.1%	6.2%	2.5%	2.9%	2.8%	2.1%	2.3%	2.1%
	China	6.8%	6.9%	6.8%	6.1%	2.3%	8.6%	3.1%	5.4%	5.0%	5.0%	4.4%	4.0%
	Germany	2.2%	2.8%	1.1%	1.0%	-4.1%	3.9%	1.8%	-0.9%	-0.5%	0.2%	0.8%	1.2%
	Japan	0.7%	1.6%	0.8%	-0.3%	-4.3%	3.6%	1.3%	0.7%	-0.2%	1.2%	0.7%	0.6%
	UK	2.2%	3.0%	1.6%	1.3%	-10.0%	8.5%	5.2%	0.3%	1.1%	1.3%	0.8%	1.3%
	India	8.3%	6.8%	6.5%	3.9%	-5.8%	9.7%	7.6%	7.2%	7.1%	7.6%	6.5%	6.5%
	France	0.7%	2.3%	1.6%	2.1%	-7.6%	6.8%	2.8%	1.6%	1.1%	0.9%	0.9%	0.9%
	Italy	1.2%	1.6%	0.8%	0.4%	-8.9%	8.9%	4.8%	0.9%	0.8%	0.5%	0.5%	0.5%
	Russia	0.2%	1.8%	2.8%	2.2%	-2.7%	5.9%	-1.4%	4.1%	4.9%	1.0%	1.1%	1.1%
	Brazil	-3.3%	1.3%	1.8%	1.2%	-3.3%	4.8%	3.0%	3.2%	3.4%	2.3%	1.9%	2.0%

Note: For India, data and projections are presented on a fiscal year basis, with FY 2024-25 (starting in April 2024) shown in the 2024 column

Source: IMF's World Economic Outlook – April 2026 Update, Crisil Intelligence

Crisil: India's GDP to grow by 6.6% in FY27

In February 2026, the Ministry of Statistics and Programme 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.

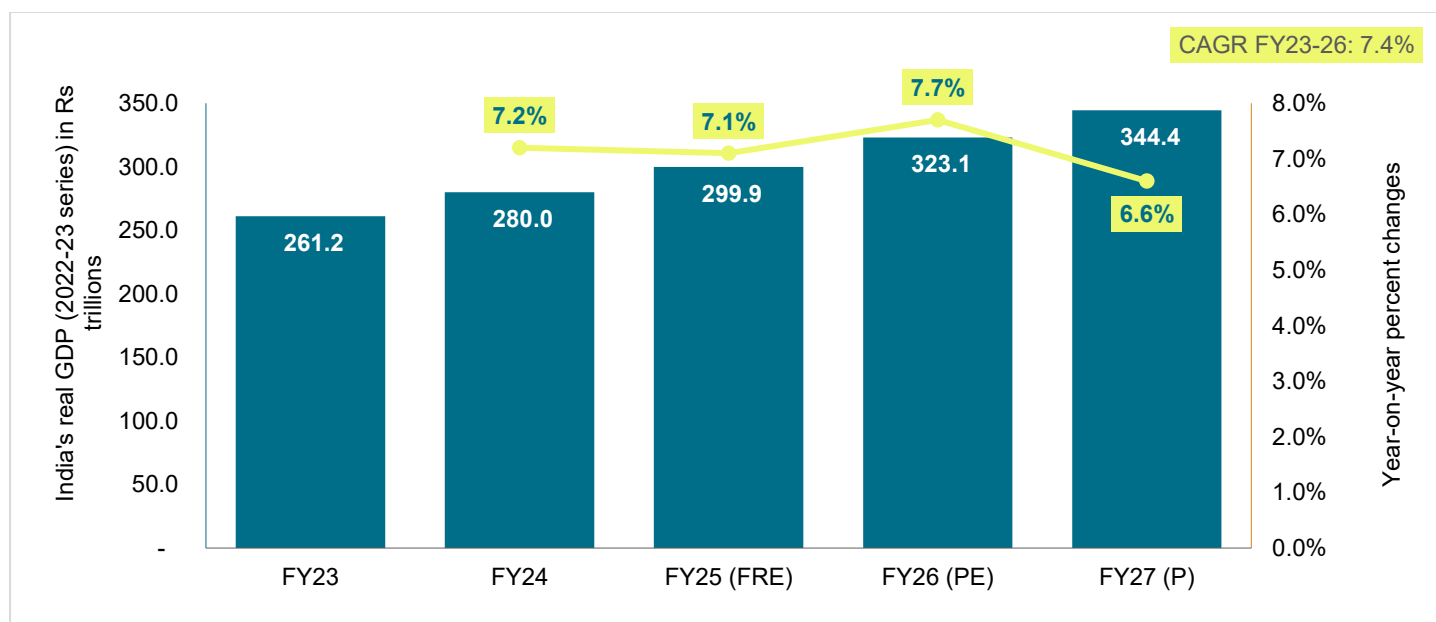
Crisil's initial forecast for FY27 considered three scenarios among which the base scenario predicated that India's GDP would grow at 7.1% in FY27. But, since the conflict in West Asia has extended beyond 2 months, the downside risks to India's economy have begun materializing. So, Crisil has laid out 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 real GDP (2022-23 series) trend and outlook (FY23-27P)



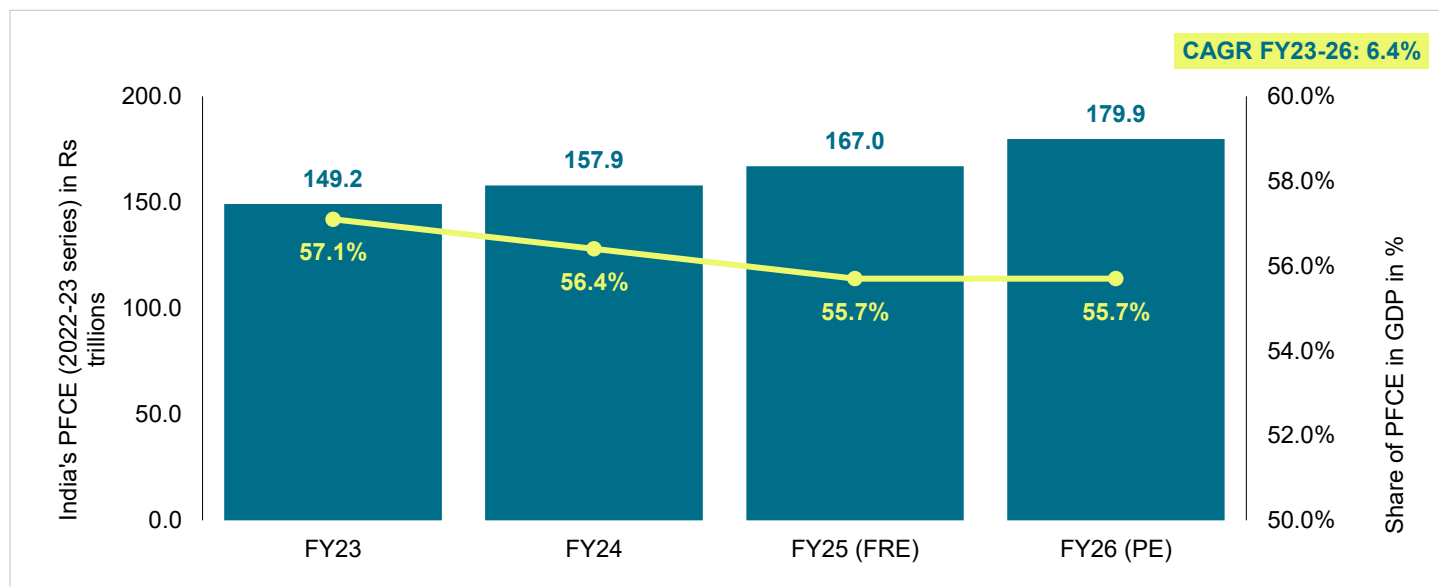
Note: FRE: First Revised Estimates, PE: Provisional Estimates, P: Projection

Source: Ministry of Statistics & Programme Implementation, Crisil Intelligence

Private consumption continues to anchor India's economic growth

India's private final consumption expenditure (PFCE) grew by 6.4% between FY23 and FY26, wherein growth between FY25 and FY26 stood at 7.7%. This growth in consumption is supported by the positive impact of GST rate rationalization, stable employment conditions, rising real purchasing power, steady rural consumption resulting from strong agricultural performance, and gradual rise in urban consumption aided by the rationalisation of direct and indirect taxes.

India's PFCE at constant prices (2022-23 series), FY23-26



Note: FRE: First Revised Estimates, PE: Provisional Estimates

Source: Ministry of Statistics & Programme Implementation, Crisil Intelligence

India's GDP is driven by three key forces

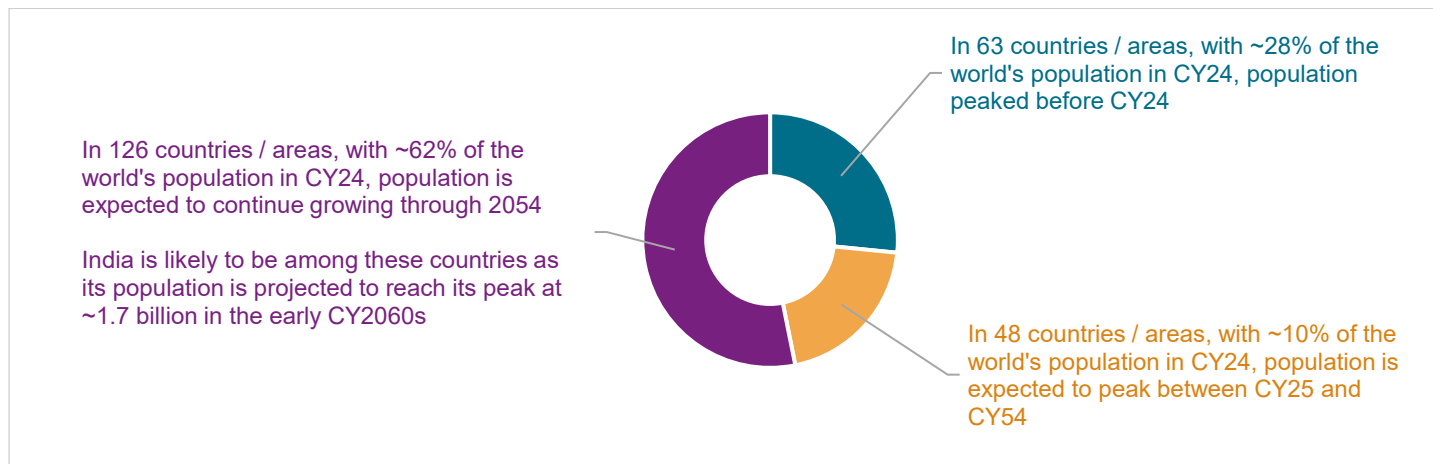
Demography	1	India has the potential to reap demographic dividends
Rising urbanisation	2	India's population is turning increasingly urban
Growing per capita income	3	India's per capita income grew by 4.9% in FY14-26

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 CY25 and CY30, 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

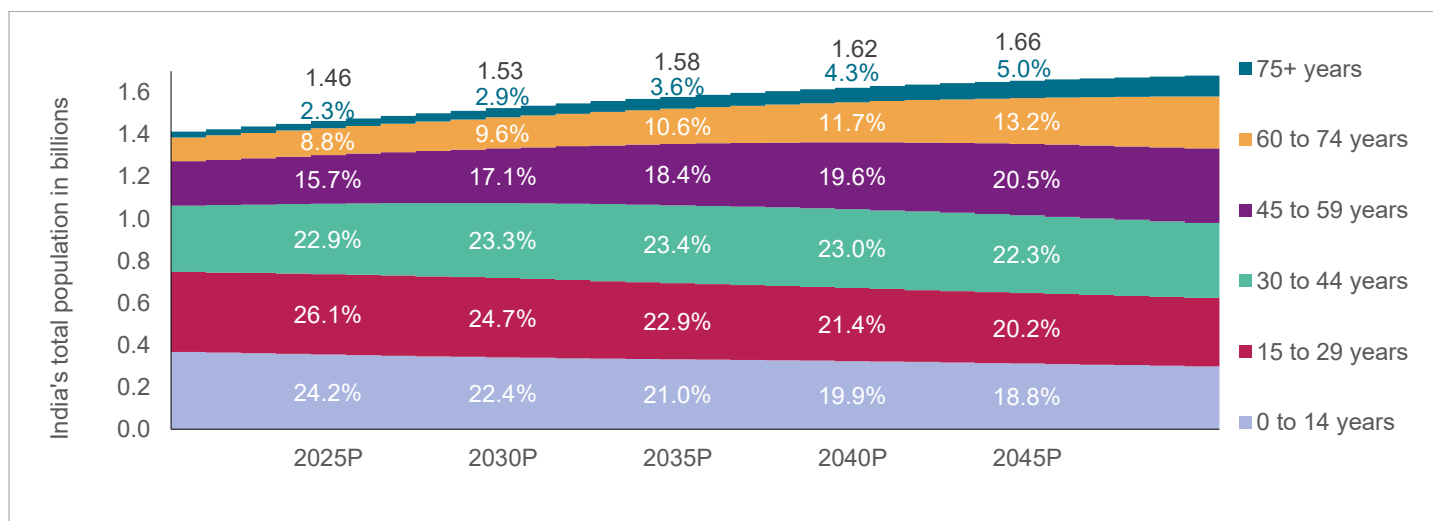


Source: United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects 2024

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 CY54, 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 CY23, 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 CY34 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



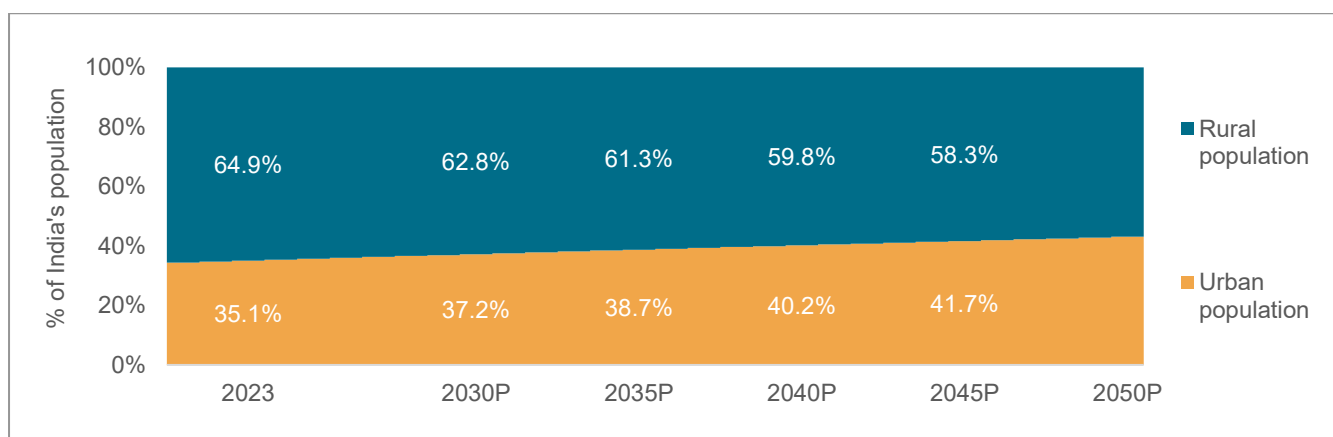
Note: P: Projected

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

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 CY2011, India's urban population made up 31.6% of its total population at an estimated 377.1 million. As per WPP 2024, India's urban population is likely to grow to 567.7 million by CY30, 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, CY2023-2045P



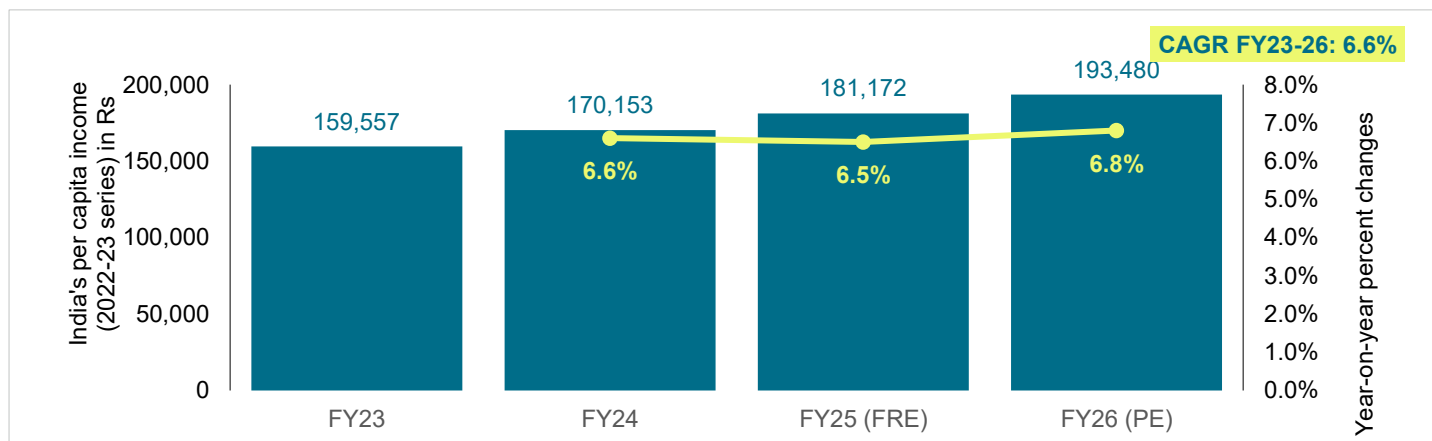
Note: P: Projection

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



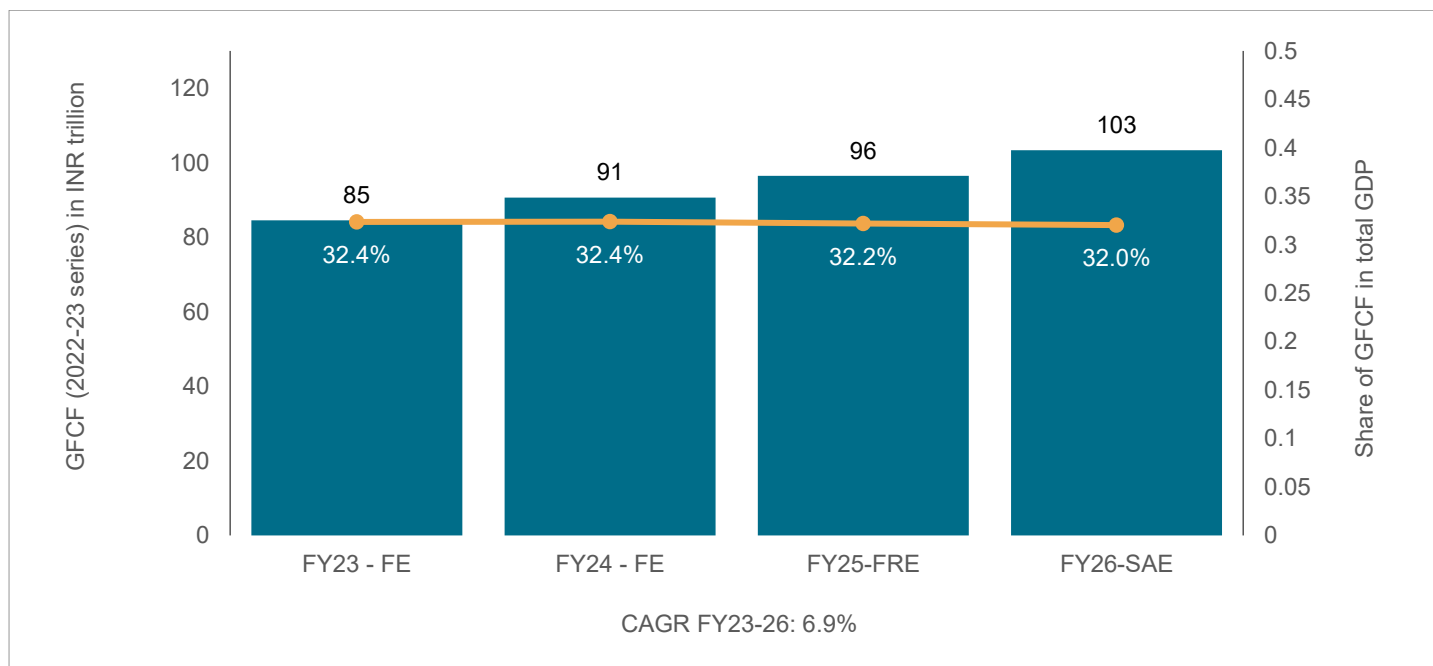
Notes: FRE: Final Revised Estimates, PE: Provisional Estimates

Source: Ministry of Statistics & Programme Implementation

India's gross fixed capital formation as % of GDP to be stagnant in fiscal 2026

Gross fixed capital formation (GFCF) measures the level of investment in creating physical assets and infrastructure, which plays a crucial role in fostering economic growth and development. Gross fixed capital formation includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings.

GFCF and GFCF %share of GDP



Note: FE: Final estimates, FRE: First Revised Estimates, SAE: Second Advance Estimates

Source: Ministry of Statistics & Programme Implementation

Inflation of key construction materials has increased in FY26, but it is in line with overall WPI inflation

Till FP, WPI inflation stood at 0.40% in FY26. WPI inflation for categories such as refractory products, paints and varnishes, manufacturing of tanks and reservoirs, electrical lighting, and fluid power equipment registered a negative WPI inflation, whereas manufacture of articles of Porcelain sanitary ware, varnishes, refractory products and cement, lime and plaster concrete cement, and plaster, and others saw a positive WPI inflation.

WPI index of key construction raw materials (%)

Key construction raw materials	FY25	FY26
Manufacture of cement, lime and plaster	-4.98%	1.18%
Manufacture of articles of concrete, cement and plaster	0.77%	1.34%
Manufacture of refractory products	-2.53%	-1.14%
Manufacture of paints, varnishes and similar coatings, printing ink and mastics	-2.26%	-1.10%
Manufacture of other porcelain and ceramic products	2.09%	2.73%
Manufacture of tanks, reservoirs and containers of metal	-2.04%	-0.73%
Manufacture of machinery for mining, quarrying and construction	1.34%	0.95%
Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus	1.85%	3.06%
Manufacture of electric lighting equipment	-6.14%	-2.26%
Manufacture of fluid power equipment	1.08%	-3.80%
Manufacture of other pumps, compressors, taps and valves	-0.19%	3.19%
Manufacture of lifting and handling equipment	-0.87%	0.00%
Overall WPI Inflation	1.71%	0.40%

Note: Inflation below zero is highlighted in green,

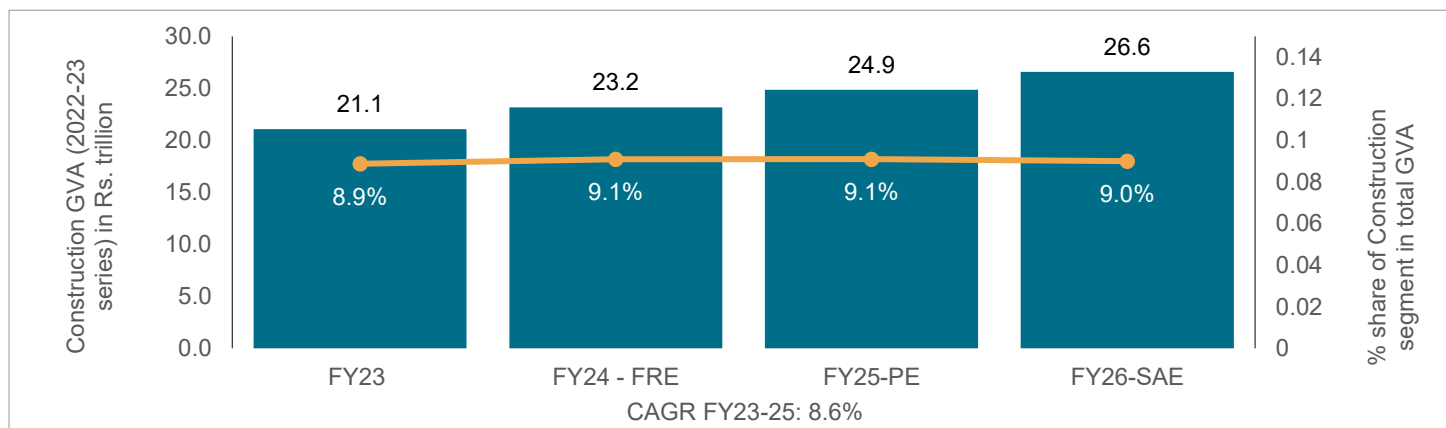
Source: Office of Economic Advisor, Crisil Intelligence

Construction sector's share in overall GVA estimated to have risen further in fiscal 2026

Construction GVA is a critical indicator of economic activity since it represents the value generated by the construction sector, which includes activities related to building infrastructure, real estate and other construction projects.

In India, construction GVA increased to Rs 26.6 trillion in fiscal 2026-SAE from Rs 21.0 trillion in fiscal 2023, which was 8.6% CAGR. Several factors contributed to the growth, including economic expansion, the government's commitment to infrastructure development, particularly roads, railways and energy projects, and increase in foreign direct investment, which boosted private sector investment. Furthermore, increasing demand for affordable housing, driven by rising urbanisation and an expanding middle-class population, has also played a significant role in elevating construction GVA.

Construction GVA at constant prices and share in total GVA



Note: FAE—First advance estimate, FRE – Final revised estimate, PE – provisional estimates

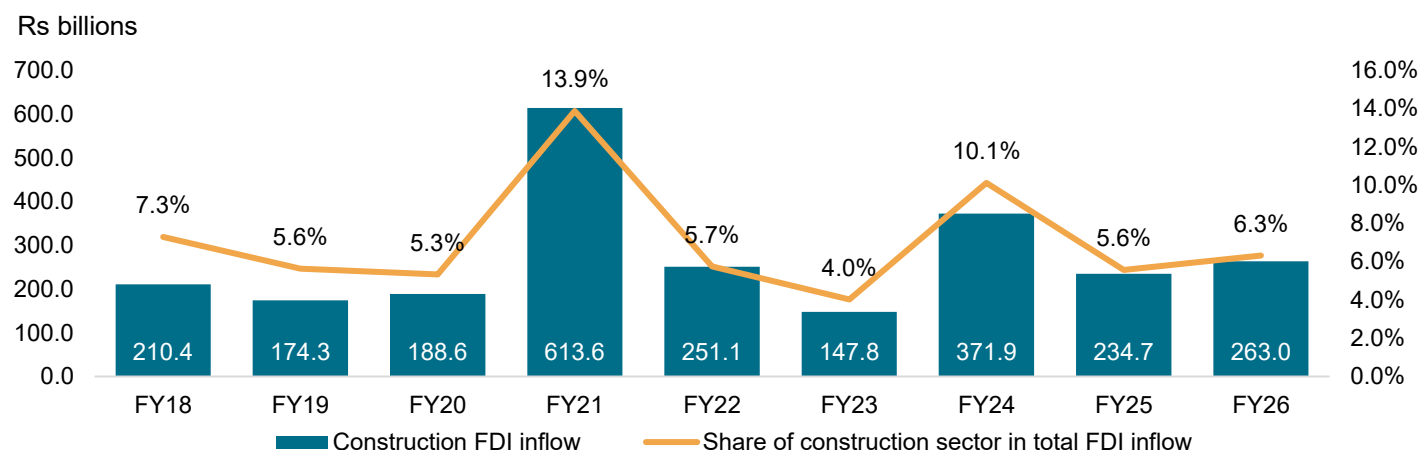
Source: MoSPI, Crisil Intelligence

Overview of FDI in construction segment in India

The construction sector is a vital component of the Indian economy, with a significant multiplier effect on the country's growth. The government's efforts to promote ease of doing business have led to an increase in Foreign Direct Investment (FDI) inflows in the sector. As a result, FDI has played a crucial role in the development of the construction industry in India, with the sector attracting significant investments from foreign investors.

The Indian government's decision to allow 100% FDI in the construction development sector under the automatic route in 2005 has been a key factor in attracting foreign investment. The sector has seen significant FDI inflows, with total FDI in the construction segment reaching a peak of Rs 613.57 billion in FY21. Notably, the total FDI in the construction segment has accounted for around 4-10% of the total FDI inflows into the country, except for FY21.

FDI inflow in construction sector of India



Note: FY26 numbers are updated till Dec-25 Construction FDI inflow numbers include both construction in infrastructure activities and construction development projects

Source: DPIIT, Crisil Intelligence

Overview of National infrastructure pipeline

In fiscal 2019, Government of India has launched the National Infrastructure Pipeline (NIP) for fiscal 2020 – 2025, with an aim to improve India's infrastructure and attract investments across various sectors. To draw up NIP, economic and social infrastructure projects worth more than Rs 1,000 million per project under construction, proposed greenfield projects, brownfield projects and those in conceptualisation stage were considered. These pipelines of projects are implemented by all the states and union territories of India and 22 infrastructure ministries under Government of India.

With various projects across sectors the NIP aims to create various employment opportunities while enhancing the standard of living. It also aims to increase investments in the projects by improving investors' confidence through better project preparation, reducing aggressive bids/failure in project delivery and ensuring enhanced access to sources of finance. Initially, the NIP started with 6,835 projects. In July 2026, this number of projects has reached to 10,442 projects across 32 different sectors. Out of these, 1,061 projects are currently under development, showing progress in India's infrastructure development efforts. The total investment target under NIP during the period, has been revised from Rs 111 trillion to Rs 147 trillion.

Despite a slowdown in the global economy, emerging economies like India continue to prioritize infrastructure development, with a focus on essential services such as roads, railways, power, water supply, and sanitation, which account for approximately 80% of the NIP. These sectors are less affected by economic fluctuations and are supported by long-term budget allocations, providing a stable source of opportunities for EPC companies. Currently, around 75% of NIP projects are being implemented through the EPC model, presenting significant opportunities for EPC companies operating in these areas

Transport, power, and water projects occupy major share under planned NIP spending of planned Rs 147 trillion

					
Power	Rail*	WSS	Roads	Real estate	Others^
25%	22%	15%	12%	7%	19%

Note: Values are rounded-off to closest whole number

**Rail also includes investments under Mass Rapid Transit System (MRTS)*

^Others include Others include Education, irrigation, rural infra, ports, airports, health, petroleum, natural gas, education, etc

Source: India Investment Grid (IIG), Crisil Intelligence

Half of the NIP projects (value terms) are under implementation

			
Planning	Pre-construction	Under construction	Completed
23%	12%	49%	16%

Note: Values are rounded-off to closest whole number

Source: India Investment Grid (IIG), Crisil Intelligence

Total EPC opportunity at ~USD 6.2 trillion

			
EPC	Private	PPP	Undecided
75%	1%	19%	5%

Note: Values are rounded-off to closest whole number

Source: India Investment Grid (IIG), Crisil Intelligence

Transport sector occupies the highest share among the total EPC contracts

				
Roads	Rail*	Power	WSS	Others^
13%	28%	20%	17%	22%

Note: Values are rounded-off to closest whole number

*Rail also includes investments under Mass Rapid Transit System (MRTS)

^Others include Others include irrigation, rural infra, ports, airports, health, petroleum, natural gas, education, etc

Source: India Investment Grid (IIG), Crisil Intelligence

Budgetary capex for infrastructure ministries is Rs 11.9 trillion, up 17.7% from fiscal 2026

Infrastructure capital expenditure (capex) for fiscal 2027 (BE) is 17.7% higher than fiscal 2026 RE—an increase largely driven by investments in logistics, power and affordable housing. Logistics cost in India is around 8% of GDP, according to estimates of the Department for Promotion of Industry and Internal Trade. It is imperative to bring down this cost to make transportation of goods efficient. With this in mind, the budget focuses on transportation sectors and has set aside a significant 53% of the total infrastructure capex for roads, railways, waterways and aviation

The budget allocation for the roads sector is up 8.3% increase over fiscal 2026 RE. Specifically, the National Highways Authority of India (NHAI) has received a 10% boost in allocation from the ministry. Additionally, the Gross Infrastructure Allocation (GIA) contribution towards road works has grown 5.2% over fiscal 2026 RE

Budget allocation for infrastructure sector

	Rs trillion	FY26RE	FY27BE
Capex - Infrastructure Ministries	Gross Budgetary Support GBS)	5.7	6.2
	Internal and external budgetary resources (IEBR)	2.3	2.6
	Grants allocation for capital creation (GIA)	2.1	3.1
	Total Capex- Infrastructure Ministries	10.1	11.9
Capex- Other Ministries	Gross Budgetary Support GBS)	5.2	6.0
	Internal and external budgetary resources (IEBR)	2.0	2.2
	Grants allocation for capital creation (GIA)	1.0	1.8
	Total Capex- Other Ministries	8.3	10.1
Grand Total		18.4	22.0

Note: 10 infrastructure ministries included: Road transport and highways, Housing and urban affairs, civil aviation, power, railways, shipping, rural development, water resources, New and renewable energy, Department of atomic energy

RE- Revised estimates, BE-Budgeted estimates

Source: Budget documents, Crisil Intelligence

Assessment of Infrastructure construction segment in India

Overview of investments in construction sector

The construction sector in India can be broadly classified into Building Construction, Industrial/ Manufacturing construction, and Infrastructure construction.

Industrial/manufacturing construction includes manufacturing plants, factories, power plants, and other highly specialised facilities. Infrastructure construction includes warehouses, bridges, dams, roads, airports, canals, etc. and building construction includes constructing buildings for residential uses such as houses, residential towers, etc. as well as non-commercial buildings like hospitals, educational institutions as well as buildings for commercial use such as offices, retail malls, etc.

The further classification of these verticals into conventional and unconventional construction methods has been discussed in the latter section of the report.

Construction Industry in India



Source: Crisil Intelligence

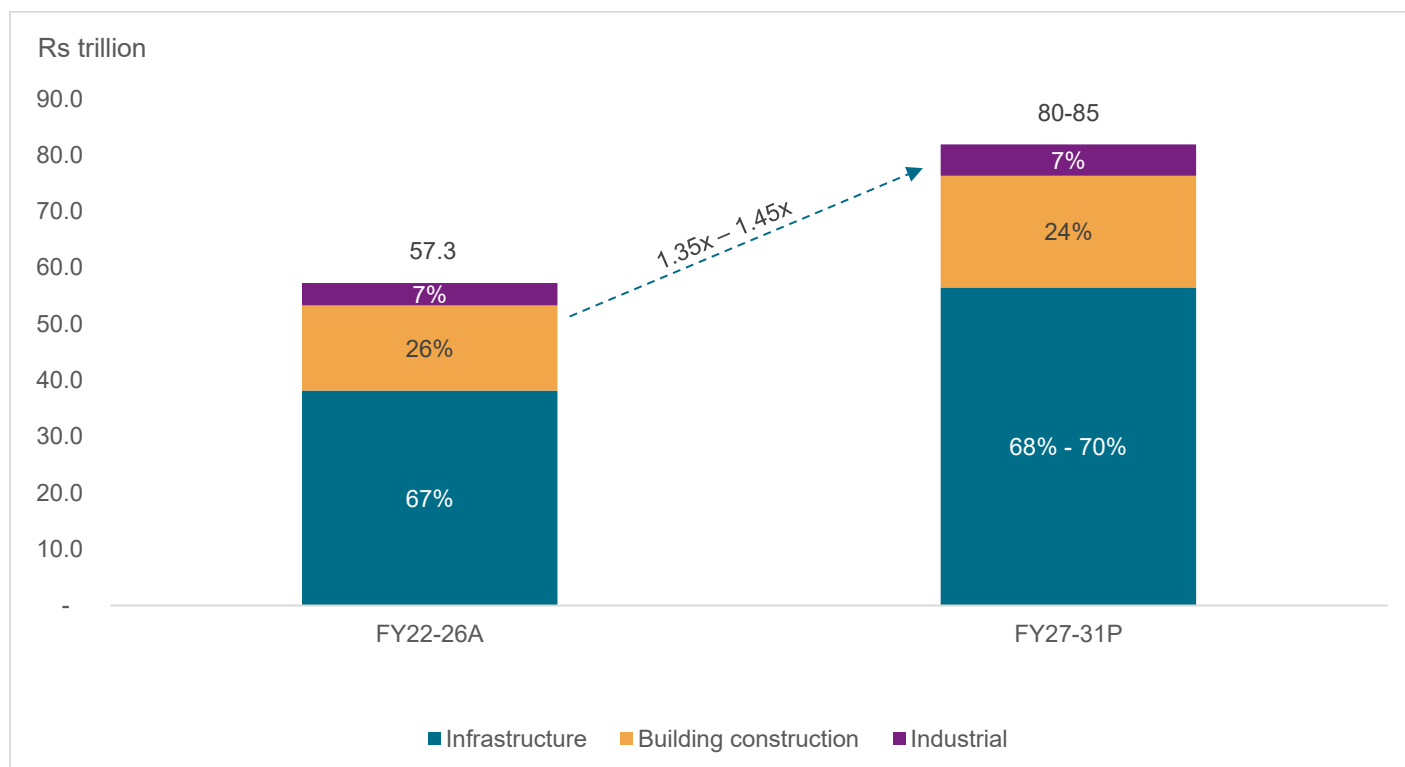
Investments in construction capex is projected to stabilize in a long-term

The construction industry in India is expected to grow steadily at an annual rate of 5-7% between fiscal years 2026 and 2031. This growth will be mainly driven by increased spending on infrastructure projects such as roads and railways, supported by both central and state government investments.

Recent policy measures and targeted government initiatives are expected to accelerate momentum in the construction sector by improving investment visibility and crowding in private participation. These initiatives, particularly focused on infrastructure creation, are likely to provide a sustained impetus to construction activity over the next 5 years.

The share of infrastructure projects is expected to stabilise in the ~68-70% range in the next five years as against ~67% for FY22-26, as Infrastructure investments are seen growing faster than the other two segments due to the Government's focus on Infrastructure under the NIP, NMP and the Gati Shakti initiative. The Central government's focus on roads, urban infrastructure and railways will boost infrastructure investments. Roads, railways, irrigation & Power sectors will continue to drive the bulk of these investments. Building & construction and industrial segments are expected to witness muted growth.

Break-up of the domestic construction sector



Note: A - Actual, P – Projected

The numbers in the above chart represents cumulative investments for the specific period

Source: Crisil Intelligence

Overview of investments across building, Infrastructure and Industrial in overall construction segment

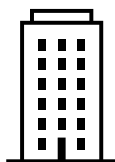
Share of infrastructure segment is estimated to increase further



FY 22-26A: **37-39 trillion**
FY27P-31P: **55-58 trillion**
Projected growth: **1.4-1.6x**

Infrastructure

- Infrastructure investments are seen growing faster than the other two sectors due to the government's focus under the National Infrastructure Pipeline (NIP), National Monetization Pipeline (NMP) and the Gati Shakti initiatives. Total construction investments in this sector is expected to attract investments of ~Rs 55-58 trillion between FY27-31P, up from Rs 37-39 trillion between FY22-26.
- Moving forward, the share of infrastructure projects is expected to stabilise in the ~68-70% range in the next five years (FY27-31). Private sector involvement in infrastructure, which has been increasing, is poised to intensify with the government's renewed emphasis on the build-operate-transfer (BOT) model in roads. The power sector continues to attract substantial private investment, driven by a sharper focus on non-fossil fuel energy generation. The government's National Monetisation Pipeline is also expected to play a key role in boosting private sector participation by facilitating its greater involvement in infrastructure development.



FY 22-26A **15-15.5 trillion**
FY27-31P: **19.5-20 trillion**
Projected growth: **1.2-1.3x**

Building

- Crisil Intelligence estimates Building & Construction sector to see stagnant growth with real estate segment showing a slowdown in demand along with rising inventory levels in key cities. The increase in execution of deferred projects and government schemes such as PMAY is expected to provide the required boost to the sector.
- Between FY27-31P, the sector is expected to rise to Rs 19.5-20 trillion from an investment of Rs 15-15.5 trillion between FY 22-26



FY 22-26A: **4 - 4.5 trillion**
FY27-31P :: **5.5 - 6 trillion**
Projected growth: **1.3-1.4x**

Industrial

- Based on an analysis of eight key sectors, Crisil Intelligence estimates construction investment in the industrial sector at Rs 5.5 - 6 trillion between FY27-30P, compared to Rs 4 - 4.5 trillion spends seen in FY22-26. The rise in investment is projected due to inclusion of the PLI scheme in the capex investments of the industrial sector.

Note: A - Actual, P – Projected

Infrastructure vertical includes warehouse

Building construction includes residential, commercial and non-commercial verticals

Source: Crisil Intelligence

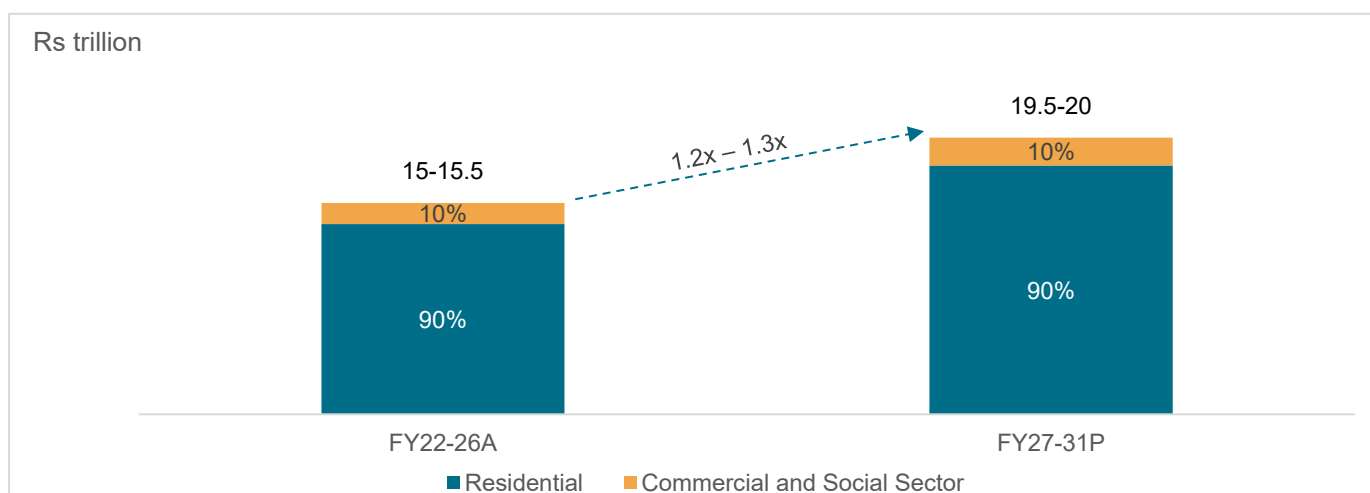
Building and Construction estimated to record 1.2-1.3x growth in FY27-31

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 sector continues to benefit from regulatory reforms such as RERA, which have improved transparency and strengthened buyer confidence. The market has remained resilient, supported by urbanisation, infrastructure development, and steady end-user demand. Developers are actively launching new projects, with a growing preference for premium and mid-income housing segments. However, affordability remains a challenge due to rising land and construction costs, prompting industry calls for policy support to boost affordable housing supply and homeownership. Overall, the sector is expected to witness stable long-term growth driven by stronger market fundamentals and improved consumer confidence.

A key factor driving growth in the building & construction segment is the central government's focus on affordable housing. In September 2024, the government launched PMAY-U 2.0 under the "Housing for All" initiative. To support this initiative, so far, the Government has committed Rs. 2.08 trillion, has released Rs. 1.79 trillion and spent Rs. 1.14 trillion as of June 2026

Share of major segments building construction spending (%)



Note: A: Actual; P: Projected

Source: Crisil Intelligence

Investments in Oil & Gas segment to drive the industrial construction sector

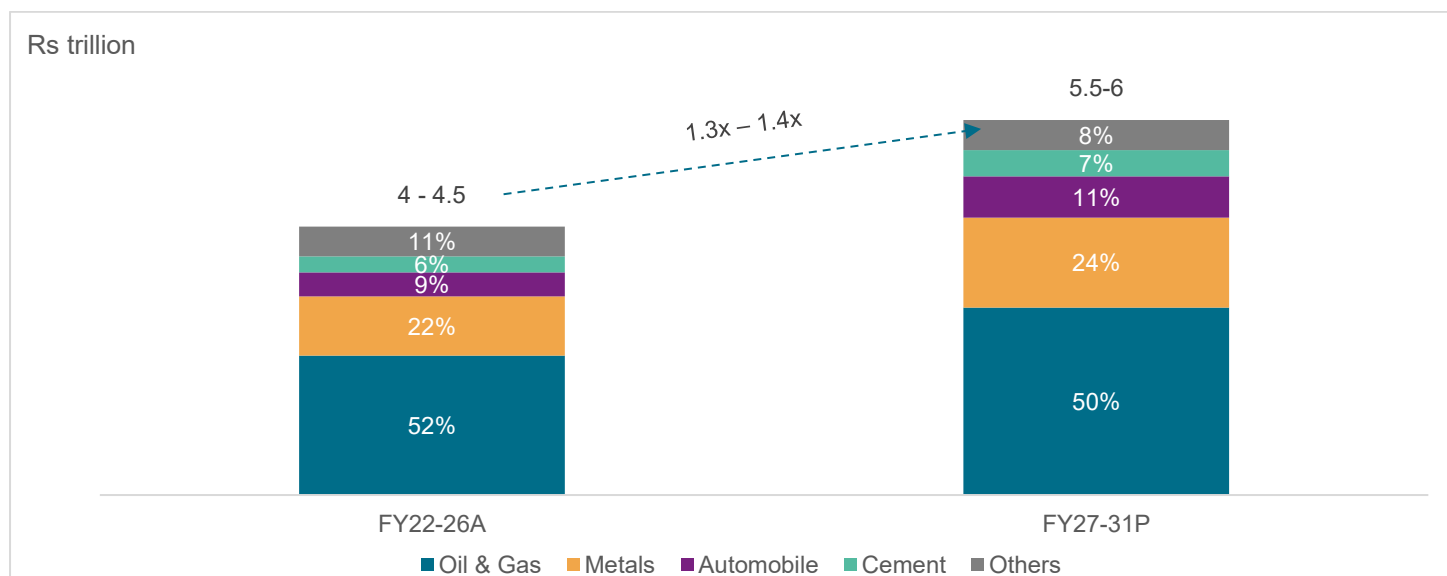
Industrial construction capex is expected to be primarily driven by the oil and gas sector, led by investments in the refining and marketing segment, followed by contributions from the metals, automobiles, and cement sectors.

Industrial construction capex peaked in FY25, driven by a sharp increase in investments in the automobile sector, alongside sustained momentum in the oil & gas and metals segments. However, capex is expected to normalize in FY26 and FY27 as investment activity reverts to more sustainable levels following the elevated spending witnessed in FY25.

Based on an analysis of eight key sectors, Crisil intelligence estimates construction investment in the industrial segment at Rs -5 – 5.6 trillion between fiscals 2027 and 2031, rising ~1.3 – 1.4x times over spends seen in fiscals 2022 to 2026. Investment growth is expected to be led by the metals sector, where upcoming capital expenditure will largely focus on brownfield expansions aimed at enhancing existing production capacities and improving operational efficiencies. Furthermore, the growth is driven by capacity addition in refineries. In FY 2026, India's refining capacity stands at 258 MMtpa and refineries are undertaking capital expenditure to expand their capacities. Over FY 2026 to 2030, 30-50 MMtpa (Million metric tonne per annum) of refining capacities are expected to be commissioned bringing the overall refining capacity to 290-310 MMTpa by FY 2030.

The rise in investments is projected due to inclusion of PLI scheme in the capex investments of industrial sector. While the PLI scheme entails 13 sectors, we have only considered 3 capex intensive sectors viz. Auto and auto components, Textiles and Specialty steel for inclusion in our estimates.

Share of major segments Industrial construction spending



Note: A: Actual; P: Projected

Source: Crisil Intelligence

Road construction continues to account for the largest share among infrastructure segments, contributing ~50% of the overall segment mix.

Roads and Highways:

Investment in the road sector grew at an average annual rate of 10% between fiscal years 2021 and 2024, driven by a high number of national highway projects being approved and built. National highway awarding reached 12,376 kms in fiscal 2023 and declined by ~60% to 7,538 kms in fiscal 2025. For fiscal 2026, awarding is estimated to be in the range of 5,000-6,000 kms with 2,257 kms already awarded until December 2025. Further, with the current pipeline of projects, awarding for fiscal 2027 is projected to be in the range of 7,000-8,000 kms and for fiscal 2028 it is projected at 7,500-8,500 km. Since road construction usually happens around 18 months after approval, the slowdown in new project awarding will likely affect actual highway construction in fiscal year 2027 & 2028

However, capex is expected to grow moderately at a CAGR of 8–10% between FY26 and FY28, driven by the government's continued focus on expanding wider, high-capacity highways and developing 20,000 km of High-Speed Corridors (HSCs) over the next five to six years.

Furthermore, with the introduction of a new concession agreement and increased government focus on revitalizing the BOT model, the share of BOT projects and private sector participation is likely to increase. Additionally, the government is using asset monetization, which involves leasing or selling completed road projects to private companies. This has already shown some success and is expected to help manage debt while ensuring steady investment in road development. The Ministry of Road Transport and Highways has set an asset monetisation target of Rs. 300–350 billion for FY27, up from Rs. 283.07 billion in FY26, with the National Highways Authority of India identifying 17 national highway assets spanning 1,692.5 km for monetisation through the TOT and InvIT routes.

Urban Infrastructure:

Urban infrastructure includes construction-intensive water supply and sanitation (WSS) projects, mass rapid transit system (MRTS), bus rapid transit system (BRTS), smart cities, and related infrastructure development. Investments increase in urban infrastructure recorded a ~25% CAGR between fiscal 2022-fiscal 2024 led by investments in water supply and sanitation under schemes such as Swachh Bharat Mission, Jal Jeevan mission, AMRUT and investments in metro projects a bulk of which were under implementation. Investments declined in fiscal 25 and further contracted in fiscal 26, primarily due to a reduction in the Centre's allocations under the Jal Jeevan Mission (JJM), amid concerns over implementation irregularities and lower-than-expected financial contributions from state governments. Furthermore, the Smart Cities Mission concluded in FY25. However, it is projected to recover growing at CAGR of 10-11% over the fiscal 2027 and fiscal 2028 due to central government allocation and state government support. The water supply and sanitation (WSS) segment is expected to remain the dominant contributor, accounting for approximately ~66% of the total investments.

Railway

The Indian railway sector, which is primarily funded by the central government, received the same budget allocation in fiscal year 2026 as in fiscal year 2025, however funding remains strong at Rs. 2.7 trillion. The allocation in fiscal year 2027 is expected to increase by 11% reaching Rs 2.9 trillion, as the government continues to focus on modernization and improving safety standards, as well as governments plans for development of new rail DFC network and development of high-speed rail corridors between key growth cities. The government is also focusing on railway safety and station redevelopment. The KAVACH safety system is being installed to reduce accidents, while the Amrit Bharat Station Scheme aims to modernize and upgrade railway stations, creating an additional ₹0.75 lakh crore investment opportunity. These initiatives highlight the government's commitment to transforming the railway sector, making it safer, more efficient, and better connected

Irrigation

Irrigation investments grew at a robust CAGR of 19.5% between FY21 and FY24. Following the strong growth recorded in FY24, spending growth moderated during FY24–FY26 to approximately 9.5% CAGR. Going forward, investment growth is expected to remain stable at around 7–9% CAGR over FY27–FY31P, supported by the continued focus of key states on completing ongoing irrigation projects. Many states still have less irrigation coverage than the national average, showing there is a lot of room for improvement. The top seven states (Andhra Pradesh, Telangana, Karnataka, Maharashtra, Gujarat, Odisha, and Madhya Pradesh) account for 65-70% of total irrigation investment, as they either have high agricultural output

or ongoing irrigation projects. These states have played a major role in the sector's growth, and their continued investments will be important for expanding irrigation coverage

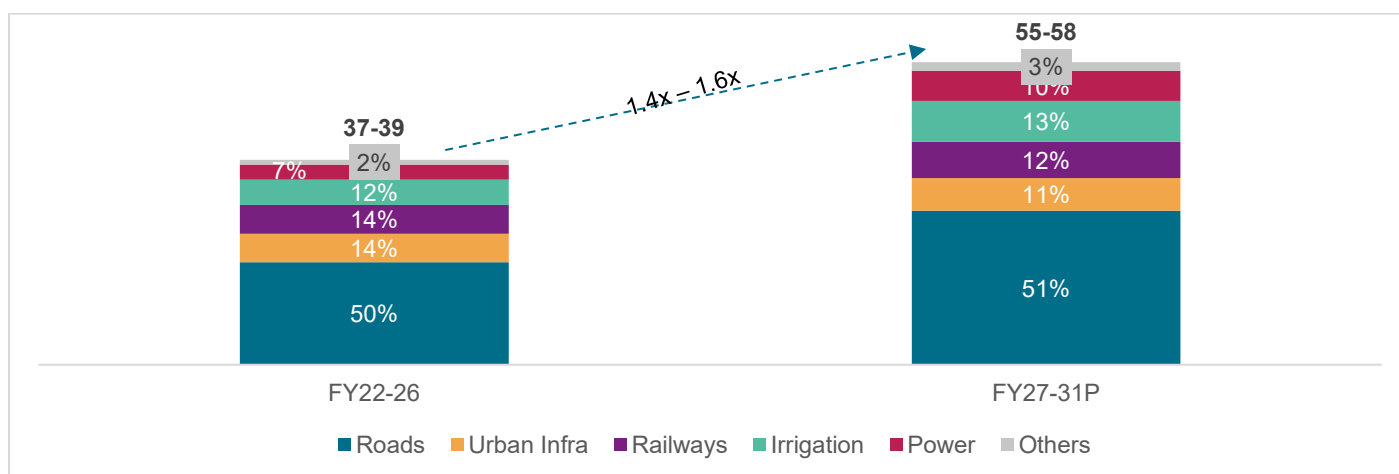
Power

According to Crisil Intelligence, construction spending in the power sector is estimated to have surged by approximately 38% in FY26E, driven by a significant ramp-up in renewable energy capacity additions. The renewable energy sector is projected to record a robust CAGR of around 27% between FY25 and FY28, taking installed capacity to nearly 319 GW. This growth underscores India's accelerating transition towards cleaner energy sources, supported by favourable policy initiatives and continued investments in renewable infrastructure. Going forward, construction spending is expected to moderate to a CAGR of approximately 10–11% during FY27–FY31, as investment intensity is likely to normalize following substantial capacity additions

Telecommunications

The Indian telecom tower industry witnessed a significant expansion in capital expenditure during FY16–FY21, driven by the nationwide rollout of 4G networks, rapid growth in mobile data consumption, and extensive network densification initiatives. Capex momentum accelerated further during FY21–FY26, supported by the large-scale rollout of 5G services by telecom operators. The transition to 5G necessitated substantial investments in tower infrastructure, deployment of new radio equipment, network densification through small cells, fiber backhaul expansion, and upgrades to power and transmission systems. Going forward, capital expenditure in the telecom infrastructure sector is expected to moderate and normalize during FY27–FY31. With the bulk of 5G radio access network (RAN) deployment and associated infrastructure investments are largely completed. While the industry is expected to initiate preparatory activities for 6G technologies toward the latter part of the decade, the initial phase is likely to be driven primarily by software-defined network upgrades, virtualization, cloud-native architectures, and spectrum efficiency enhancements. Consequently, 6G-related investments are not expected to be as infrastructure-intensive as the initial phases of 4G or 5G rollouts, resulting in a more measured capex trajectory for the telecom tower industry over the medium term.

Share of major segments in overall Infrastructure construction spending



Note: A: Actual; P: Projected ; Others includes Ports, warehousing, Telecom towers etc.

Source: Crisil Intelligence

SWOT analysis of Infrastructure construction industry

S (Strength)	Growing Economy: India's economic growth supports infrastructure development and construction activities. Government Initiatives: Programs like Sagar mala, Bharat mala, development of metros, Jal Jeevan mission and significant investments in infrastructure projects boost the construction sector Abundant Labor Supply: India has a large pool of skilled laborers, including masons, carpenters, and engineers, who are readily available for construction projects. Low-cost labour: Labor costs in India are relatively low compared to other countries, making it an attractive destination for construction projects. Growing Domestic Market: Growth in major sectors such as automobile, residential, commercial real estate, couple with population growth.
W (Weakness)	Environmental concerns: Construction companies in India has faced criticism for its impact on the environment, particularly in terms of waste generation and energy consumption. High Capital investments: Companies in this sector requires substantial upfront capital. This coupled with high borrowing costs can limit the capacity for construction. Input related risk: Rise in raw material costs would impact the profitability of the companies. However, presence of cost escalation clause in contract would aid in protecting the contractor Working capital management: delay in payment from government agencies and security and retention money stretch working capital resulting in high interest costs.
O (Opportunities)	Urbanization: Rapid urbanization offers significant opportunities for residential, commercial, and infrastructure projects. Eco-friendly initiatives: The global transition towards environmentally responsible initiatives, such as renewable energy sources, advanced wastewater treatment systems, and Greenfield highways, is creating a surge in demand for companies in the construction sector, presenting a significant opportunity for growth and development in the industry Rural Development: Government focus on rural infrastructure development creates opportunities in new geographic areas.
T (Threats)	Economic Slowdown: Any downturn in the economy can significantly affect the infrastructure sector. Regulatory challenges: Changes in regulations, such as safety standards and building codes. As companies need to comply with these standards, this can impact the project costs and timelines. Advancement in technology: Companies should be abreast with latest technologies in order to optimise project management and improve execution efficiency. However, this requires capital investments towards skill development. Lack of such investments would it make it diificult for players to obtain projects. Competitive Pressure: Industry is highly competitive with many firms vying for same projects. This intense competition can pressure profitability and reduce market share.

Water treatment, wastewater treatment and supply market in India

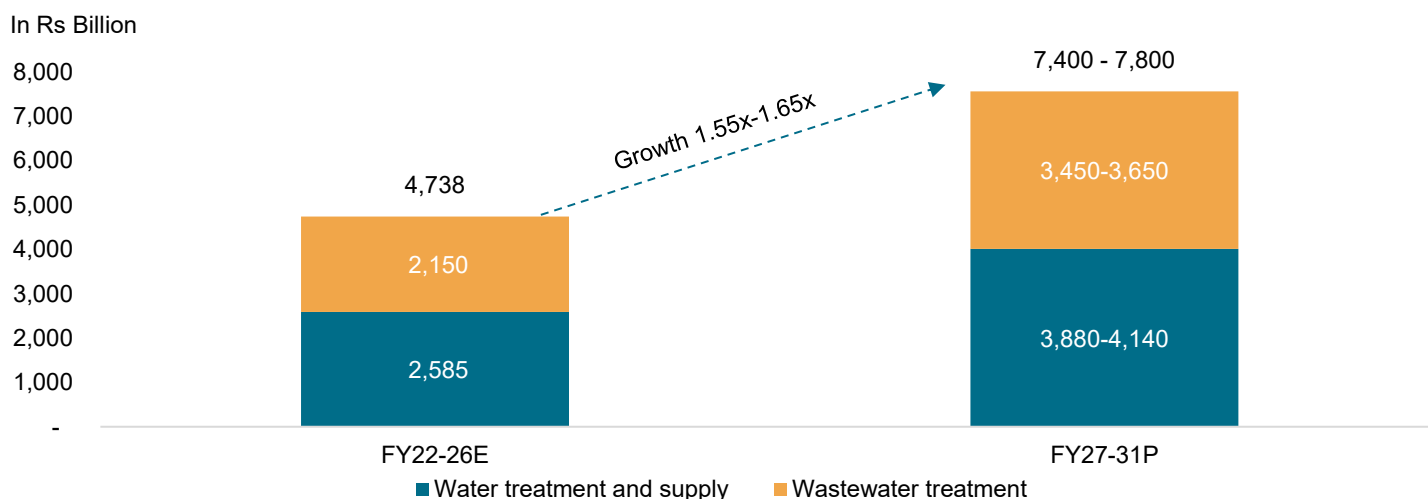
Overview of construction spend on Water treatment, wastewater treatment and supply market

Govt's increased focus on water supply and sanitation to drive investments

Investments in urban infrastructure recorded a 22% CAGR between fiscal 2022-fiscal 2026 led by investments in Water supply and sanitation under schemes such as Swachh Bharat Mission, Jal Jeevan mission, AMRUT and deferred investments in Metro projects a bulk of which were under implementation and have achieved financial closure. Urban infrastructure includes construction-intensive mass rapid transit system (MRTS), bus rapid transit system (BRTS), water supply and sanitation (WSS) projects, smart cities, and related infrastructure development.

Crisil Intelligence projects ~Rs 7,400-7,800 spends on water treatment, supply and wastewater treatment between fiscals 2027 and 2031, which is ~ 1.55x-1.65x higher than the amount invested in the previous five years. Water treatment, wastewater treatment and supply projects are expected to account for more than half of the total urban infrastructure investments over the next five years, driven primarily by state governments and through centrally sponsored programmes such as Jal Jeevan mission, AMRUT and Swach Bharat mission.

Construction spends on water and wastewater treatment infrastructure



Notes: P: projected

Source: Crisil Intelligence

Indian water treatment market has grown remarkably over the past five years, fuelled by the government's initiatives to enhance water supply and sanitation infrastructure. The Har Ghar Jal scheme for rural areas under the Jal Jeevan Mission and the 24x7 water supply plan for 500 cities under the AMRUT programme have been instrumental in driving this growth, with additional support from other schemes such as the SBM-R, SBM-U, etc.

Rapid growth in water treatment and supply market can be attributed to significant investments in water infrastructure, including the augmentation of water treatment plant (WTP) capacity, renovation of existing WTPs and expansion of pipeline infrastructure. The integration of cutting-edge technologies, such as SCADA and leakage detection systems, has played a crucial role in modernising the sector. With continued urbanisation and industrialisation, the country's demand for clean water is on the rise, creating a pressing need for efficient water treatment solutions.

The Jal Jeevan Mission has already led to substantial investment in rural water infrastructure, with rural household tap water connections increasing from 16.1% in 2019 to 80% just five years later, the next phase of growth is expected to be driven by urban development. The government's plans to provide 24x7 water supply and reduce non-revenue water (NRW) in urban areas are anticipated to be major growth drivers.

Overview of Wastewater treatment landscape in India

In India, the wastewater sector is facing significant challenges, with a large portion of the population lacking access to proper sanitation and wastewater treatment facilities. The National Commission for Integrated Water Resources Development (NCIWRD) projects the country's water requirements to reach approximately 1,180 billion cubic metres by 2050, with around 70% allocated for agriculture, 9% for drinking water, 7% for industrial purposes, 6% for energy generation and the rest for other uses.

Research conducted by the Ministry of Jal Shakti shows the quality of rivers has shown some improvement, with 46% of rivers examined in 2022 designated as contaminated, compared with 70% in 2015. The Central Pollution Control Board (CPCB) has identified the release of industrial waste and untreated or partially treated municipal wastewater into water bodies, and inadequate solid waste management as some of the primary causes of water pollution.

A 2021 assessment by NITI Aayog indicates that India is one of the most water-stressed regions globally, with approximately 600 million Indians facing high water stress. By 2030, the demand for the water is expected to be twice the available supply, potentially leading to water scarcity for millions of people and impacting the country's GDP. Effective management of water resources, and reusing and recycling them, is essential for a sustainable future.

Wastewater generation and treatment capacity in India

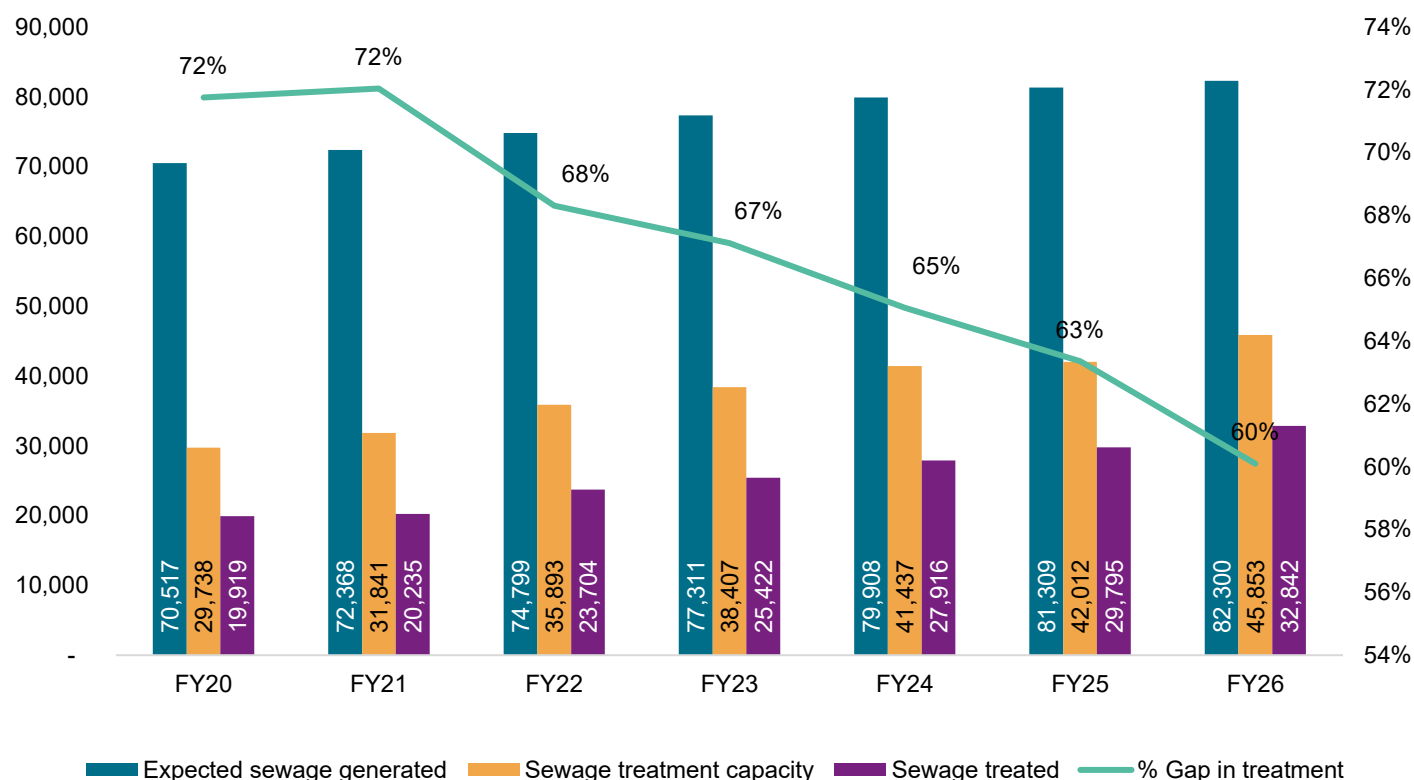
The expected sewage generated has increased steadily over the years, from 70,517 MLD in fiscal 2020 to 82,300 MLD by fiscal 2026, based on population growth and rapid urbanisation. Sewage treatment capacity has also increased from 29,738 MLD to 45,853 MLD during this period, based on monthly reports submitted by state pollution control boards to the National Green Tribunal (NGT). This is a positive step towards addressing the country's wastewater management challenges.

The actual sewage treated has also shown an increasing trend, from 19,919 MLD to 32,842 MLD, indicating a growth of ~30% during the period. While there is still a significant gap between installed capacity and actual treatment, it has narrowed over the years, indicating improved utilisation of existing infrastructure. This suggests that while there is still a significant gap in treatment capacity, the country is making progress in treating a larger proportion of sewage generated.

Another significant reason for low utilisation is the lack of proper sewage supply infrastructure in many areas. In some cases, the sewage collection network is incomplete, or the pipes are old and leaky, leading to significant losses of sewage during transmission. This results in a lower volume of sewage reaching the STP, which in turn affects the utilisation rate. The

structural challenges in achieving optimal STP utilisation are multifaceted, involving not only the physical infrastructure but also the coordination and interface between various stakeholders, including Public Health Engineering Departments (PHED) and Urban Local Bodies (ULBs). Companies operating in this space are attempting to mitigate these challenges through phased implementation of STP projects, prioritising areas with existing sewage infrastructure and ensuring that new capacities are created in tandem with the development of supporting infrastructure. Furthermore, they are working closely with PHED and ULBs to enhance interface coordination, streamline sewage collection and transmission, and ultimately increase the utilisation rates of STPs.

STP capacity vs utilisation (In MLD, %)



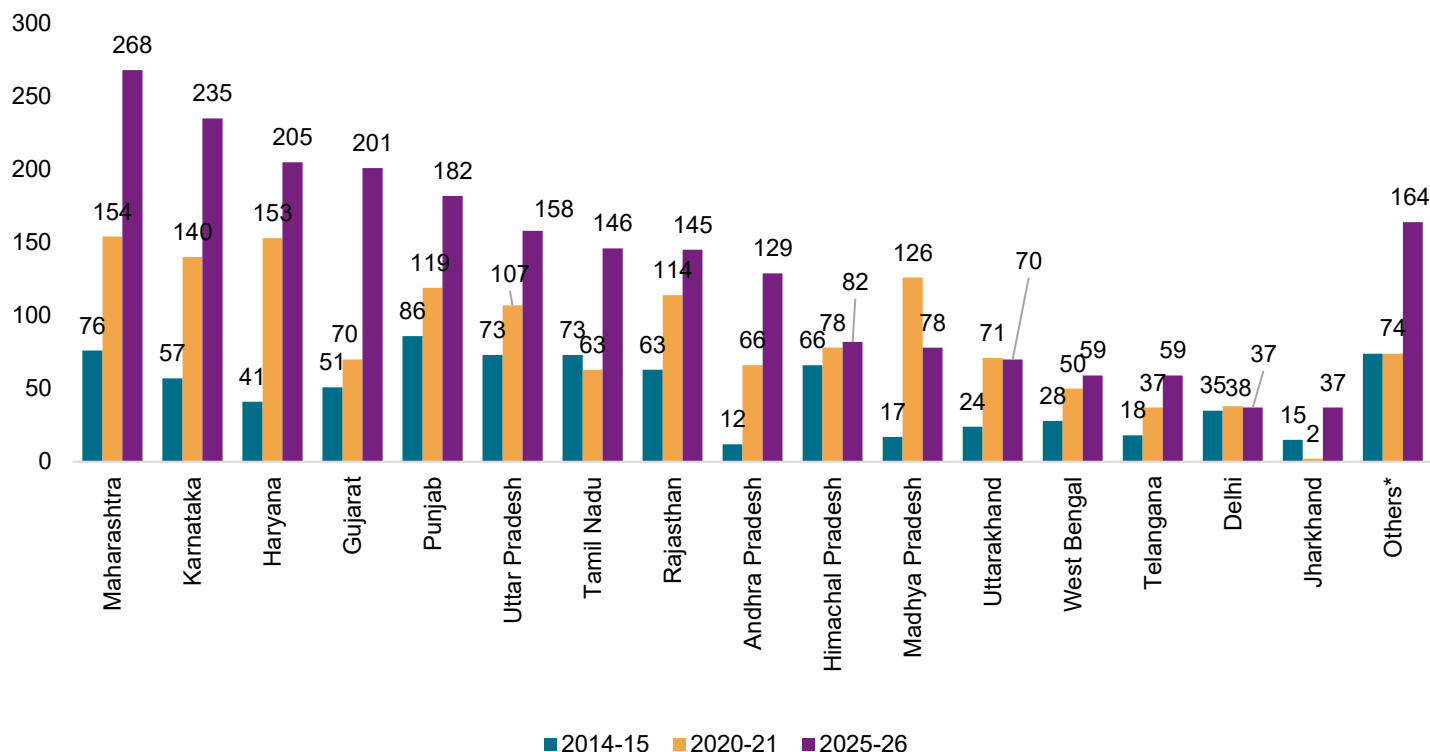
Note: For states where NGT monthly progress reports for March were not available, data from the nearest available month was used. Additionally, data for Chandigarh and Arunachal Pradesh has not been published and therefore was not included in the analysis

Source: NGT monthly progress reports, Niti Aayog, CPCB, Crisil Intelligence

The state-wise distribution of STPs reveals that the top six states, namely Gujarat, Haryana, Karnataka, Punjab, Uttar Pradesh, and Maharashtra account for approximately 55% of the total STPs in fiscal 2026. Maharashtra leads the pack with 268 STPs, followed closely by Karnataka with 235 STPs.

Certain states, including Maharashtra, Gujarat, Haryana, Karnataka, and Uttar Pradesh, have not only established a large number of Sewage Treatment Plants (STPs) but have also demonstrated remarkable growth in their numbers between 2015 and 2026, with some even achieving triple-digit growth. This surge suggests that these states are prioritizing the development of smaller, ULB-based STPs, which has contributed to the significant increase in their overall numbers.

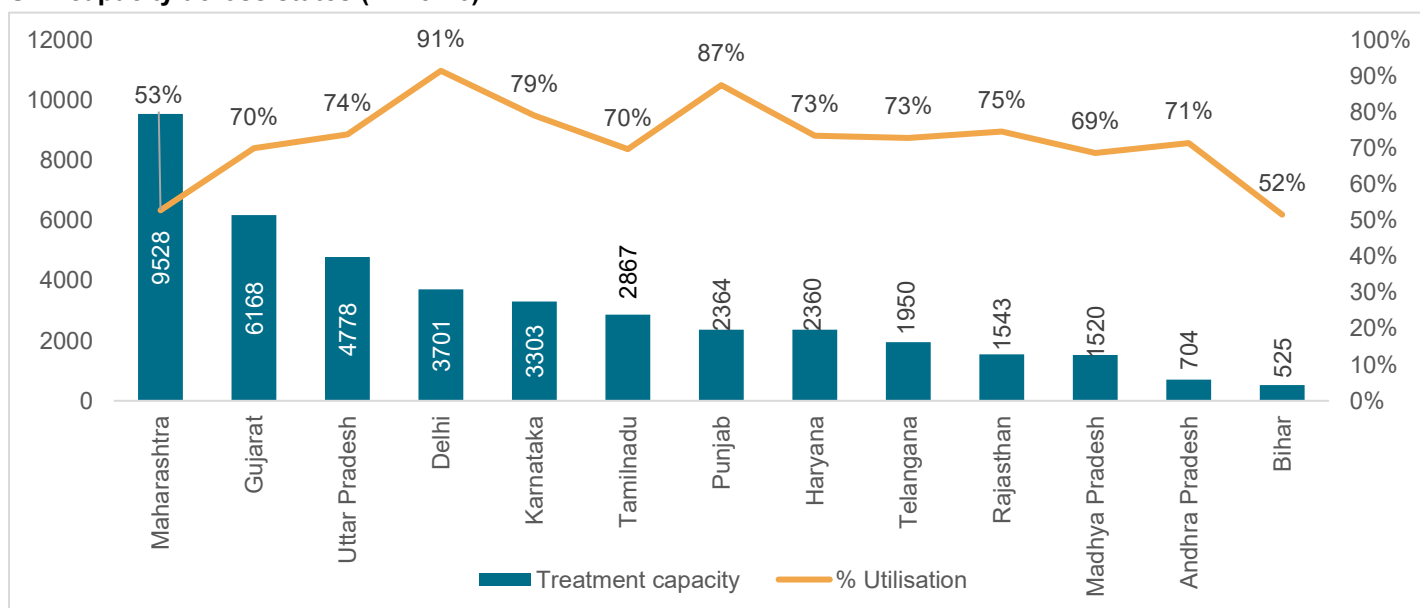
Number of STPs across states



Notes: * Others includes states with less than 20 operational STPs such as J&K, Odisha, Goa, Sikkim, Puducherry, Bihar, Kerala, Mizoram, Daman & Diu, Tripura

Source: CPCB Status of STP report, MPR report published by each SPCBs, Crisil Intelligence

STP capacity across states (FY25-26)



Note: For states where NGT monthly progress reports for March were not available, data from the nearest available month was used. Additionally, data for Chandigarh and Arunachal Pradesh has not been published and therefore was not included in the analysis

Others include states Jharkhand, J&K, Kerala, Himachal Pradesh, Goa, Puducherry, Manipur, Nagaland, Sikkim, Dadra & Nagar Haveli, A&N Island, Mizoram, Tripura, Assam, Meghalaya, and Lakshadweep

Source: NGT monthly progress reports, Crisil Intelligence

The states with the highest treatment capacity are Maharashtra, Gujarat, Uttar Pradesh, Delhi and Karnataka, accounting for more than 50% of the country's total treatment capacity. Maharashtra has the largest share at around 23%, followed by Gujarat with 15%, Uttar Pradesh with 12%, and Delhi and Karnataka with each around 8%. These are among the most populous and industrialised states and their high treatment capacities reflect the significant efforts being made to manage their wastewater.

Overall, the data indicates that the top 10 states are making significant progress in managing their wastewater. This progress can be attributed to state-level initiatives, such as the New Liquid Waste Management Rules in Gujarat and Maharashtra's upgraded water policy of 2019, which added mandates on reuse and sanitation. These initiatives highlight the importance of tailored approaches to address the unique challenges and opportunities in each state.

Wastewater treatment technologies

The wastewater industry employs various technologies and treatment plants to remove contaminants and pollutants from water. Here is a qualitative overview of some key technologies and types of treatment plants:

Activated sludge process (ASP): It is a biological treatment method that uses microorganisms to break down organic matter in wastewater. It involves aerating the wastewater to promote microbial growth, followed by settling and removal of the sludge.

Membrane bio reactor (MBR): It is a hybrid treatment process that combines biological treatment with membrane filtration. It uses microorganisms to break down organic matter and then uses membranes to separate the treated water from the sludge.

Moving bed bio reactor (MBBR): It is a biological treatment process that uses moving beds of biomass carriers to support microbial growth. It is a compact and efficient treatment process that can handle high organic loads.

Sequencing batch reactor (SBR): It is a biological treatment process that uses a single tank to perform all treatment steps, including filling, reacting, settling and decanting. It is a flexible and efficient treatment process that can handle variable flows and loads.

Others: Other key technologies and types of treatment plants include trickling filter, rotating biological contactor (RBC), upflow anaerobic sludge blanket (UASB) reactor, constructed wetlands, and advanced oxidation processes (AOPs), which use various methods such as fixed bed media, rotating disks, sludge blankets, plants, and oxidising agents to break down organic matter and remove contaminants from water.

Different tendering models in water and wastewater treatment

The Indian water and wastewater sector has witnessed a significant trend in project implementation, with projects across water supply, wastewater and desalination segments being implemented mainly under three models EPC, PPP, PPP – HAM models. However, PPP-HAM is emerging as a popular alternative, with increasing interest from private players even though the majority of the project in WSS segment is happening through EPC mode.

Overview of EPC mode

Over the years, the infrastructure business has seen various contracting methods evolve. Traditional contracting models have been replaced by new approaches as projects have grown more complex. Gradually, the responsibility for project management has moved from the owner or developer to the contractor.

This shift is evident in the move from owner-managed projects to Engineering, Procurement, and Construction (EPC) contracts. In EPC contracts, the contractor assumes the risks of time and cost overruns, along with the responsibilities for design, material procurement, and construction. These contracts also shield the owner/developer from currency and interest rate fluctuations.

Unlike other contracts where procurement and design are separate processes, EPC contracts integrate them, reducing the overall project duration. Contract which requires heavy financial and technically requirement generally divided into smaller EPC projects. A typical EPC project covers design, civil works, equipment purchase and installation, and commissioning. Most of the EPC players provide integrated and customised solutions as per the client requirements through a consultative approach.

Key factors influencing EPC player selection



Further in India, in general, a single stage two-part system (referred to as the "Bidding Process") is used for selection of the EPC contractor in order to award the project. It includes technical evaluation and financial evaluation

Technical qualification: In this the eligibility and qualification criteria are evaluated based on years of experience and expertise of the contractor in the said industry in which EPC project is being executed, domicile of the executing contractor, availability of resources with the contractor and capabilities of such resources among others

Financial qualification: In this the average annual turnover of the EPC contractor over the past 3 financial years is considered which needs to be above the said criteria mentioned along with this the EPC contractor should have a minimum net worth (set forth in bid document) as per his financials. Further, in some cases a minimum amount of working capital as

per its latest financials is also considered. In addition, the contractor is also asked to furnish financial statements for the necessary financial years.

After thorough evaluation of all bid documents, the L1 bidder with the lowest bid value is identified, but the selection process doesn't end there - multiple iterations of checks and evaluations are conducted to ensure the most competitive bidder is selected. For example, MoRTH follows a structured approach for selecting the final bidder, which includes multiple stages of evaluation and iteration to determine the best-suited contractor for the project.

Step 1: Identification of L1 Bidder

- Among all responsive bidders, the lowest bidder will be termed as L1.
- If L1 is a 'Class-1 Local Supplier', the contract will be awarded to L1 directly.

Step 2: Preference to Class-1 Local Suppliers

- If L1 is not a 'Class-1 Local Supplier', the lowest bidder among the 'Class-1 Local Suppliers' will be invited to match the L1 price.
- This is subject to the Class-1 Local Supplier's quoted price falling within the margin of purchase preference.
- The contract will be awarded to the Class-1 Local Supplier who matches the L1 price.

Step 3: Iterative Process for Class-1 Local Suppliers

- In case the lowest eligible Class-1 Local Supplier fails to match the L1 price, the next higher bidder among the Class-1 Local Suppliers within the margin of purchase preference will be invited to match the L1 price.
- This process will continue until a Class-1 Local Supplier matches the L1 price or none of the Class-1 Local Suppliers within the margin of purchase preference are willing to match the L1 price.

Step 4: Award of Contract

- If a Class-1 Local Supplier matches the L1 price, the contract will be awarded to that supplier.
- If none of the Class-1 Local Suppliers within the margin of purchase preference match the L1 price, the contract will be awarded to the L1 bidder.

Margin of Purchase Preference

- The margin of purchase preference is the maximum extent to which the price quoted by a Class-1 Local Supplier may be above the L1 for the purpose of purchase preference.
- The margin of purchase preference is set at 20%.
- This means that a Class-1 Local Supplier's quoted price can be up to 20% higher than the L1 price and still be considered for the contract.

Overview of entry barriers for EPC industry in India

The Engineering, Procurement, and Construction (EPC) industry in India is a vital part of the country's infrastructure development, encompassing sectors like infrastructure, and industrial projects. However, there are multiple challenges faced in EPC modes:

- **High Capital Requirements:** The EPC industry demands substantial initial investments for equipment, technology, and skilled manpower. Smaller firms may find it challenging to secure the necessary funding to compete with established players.
- **Regulatory and Compliance Issues:** The industry is heavily regulated, requiring companies to comply with various environmental, safety, and labour regulations. Navigating these regulations can be complex and costly affair, posing a significant barrier for new entrants.
- **Technical Expertise:** Some of the EPC projects often require specialized technical knowledge and expertise of the industry. Companies must possess a skilled workforce capable of handling complex engineering tasks and innovative construction techniques. Building such a team is a considerable challenge for newcomers.
- **Project Management Skills:** Managing large-scale EPC projects requires robust project management skills to ensure timely and cost-effective completion. New entrants might lack the experience and processes needed to manage such projects efficiently.
- **Financial Risks and Creditworthiness:** EPC projects often involve significant financial risks, including cost overruns and delays. New entrants must demonstrate strong financial stability and creditworthiness to secure contracts and financing, which can be challenging without a proven track record.
- **Competitive Landscape:** The EPC industry in India is highly competitive, with established players having strong market presence and relationships with key stakeholders. Breaking into this competitive landscape requires significant marketing efforts and the ability to differentiate from existing competitors.

Overview of PPP model

Under PPP, there are several models that have gained popularity but HAM (Hybrid annuity model) has gained the popularity in the water and wastewater treatment industry. Below are the few different tendering models which is taken under PPP modes

- **Design-build-operate-transfer (DBOT):** A model where the private sector partner designs, builds, and operates the project for a specified period, after which it is transferred to the government
- **Design-build-operate (DBO):** A model where the private sector partner designs, builds, and operates the project, but the ownership remains with the government
- **Build-own-operate-transfer (BOOT):** A model where the private sector partner builds, owns, and operates the project for a specified period, after which it is transferred to the government
- **Design-build-finance-operate-transfer (DBFOT):** A model where the private sector partner designs, builds, finances, and operates the project for a specified period, after which it is transferred to the government

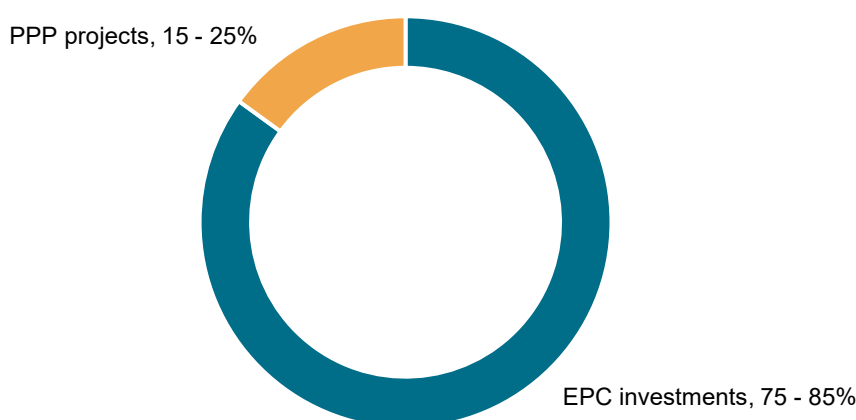
- **Build-operate-transfer (BOT):** A model where the private sector partner builds and operates the project for a specified period, after which it is transferred to the government
- **Hybrid annuity model (HAM):** A model where the government provides 40% of the project capital cost as construction support, and the remaining 60% is paid as annuity payments throughout the operations phase, plus interest.

EPC projects among the overall infra investments for water supply and sanitation to remain at 75-85%

We have assessed water supply, water sanitation, wastewater management, and water treatment plant projects, to evaluate investments through the EPC (Engineering, Procurement, and Construction) route.

Purely for water supply projects, more than 95% of project investments happen via the EPC route. Considering wastewater treatment and water supply projects together, it is estimated that 80-90% of investments in the sector happen via the EPC route, while the rest happen via public private partnership (PPP).

EPC investments in the water (irrigation + WSS) sectors



Source: Crisil Intelligence

Key projects across water and wastewater treatment sector in India

Key projects in Water treatment and supply sector in India

Sr no	Project	State / Union territory	Capacity	Total cost (Rs Mn)	Status
1	Water Treatment Plant (Wazirabad) - Improvement	Delhi	455 MLD	25,740.00	Planning
2	Water Treatment Plant (Assam)	Assam	98.00	8,097.9	Planning
3	Water Treatment Plant (Bhandup)	Maharashtra	2,000 MLD	41,238.80	Under execution
4	Water Treatment Plant (Bilga, Ludhiana)	Punjab	580 MLD	15,460.00	Under execution
5	Water Treatment Plant (Aluva) and associated transmission network	Kerala	190 MLD	4,950.00	Under execution
6	Water Supply Scheme (Indore)	Madhya Pradesh	400 MLD	5,797.80	Under execution
7	Water Treatment Plant (Jite, Raigarh)	Maharashtra	270 MLD	4,264.70	Under execution
8	Water Treatment Plant (Bidkin) and associated transmission network	Maharashtra	70 MLD	4,000.00	Under execution
9	Water Treatment Plant (Vallah) associated transmission network and over head service reservoirs	Punjab	440 MLD	6,653.20	Under execution
10	Water Treatment Plant & its ancillary structures for improvement of water supply to Bhubaneswar city	Odisha	130 MLD	3,120.00	Under execution
11	Water Treatment Plant (Dighi Port Industrial Area)	Maharashtra	50 MLD	1,771.60	Under execution
12	Telangana Drinking Water Supply Scheme for Adilabad, Karimnagar, Warangal, Khammam, Nalgonda, Mahaboobnagar, Medak, Nizamabad and Rangareddy districts of Telangana	Telangana	1,30,000 km – covering 26 internal grids, 62 intermediate pumping stations, 16 intake wells, 110 water treatment plants and 37,573 Overhead Service Reservoirs.	42,8530	Under execution
13	Pipe Water Supply Scheme (Mathura)	Uttar Pradesh		33,115.00	Under execution

Note: The above list is not exhaustive and only an indicative list of projects

Source: Projects Today, Crisil Intelligence

Table 1: Key projects for Desalination plants

Sr no	Project	State / Union	Capacity	Total cost (Rs Mn)	Status
1	Desalination Plant (Manori)	Maharashtra	400	130,280	Planning
2	Desalination Plant (Vadinar)	Gujarat	N.A.	84,000	Planning
5	Desalination Plant (Visakhapatnam)	Andhra Pradesh	100	12,100	Planning
6	Desalination Plant (Tuticorin) Project	Tamil Nadu	60	10,807.70	Planning
3	Desalination Plant (Karedu)	Andhra Pradesh	200	22,000	Under execution
4	Desalination Plant (Kona)	Andhra Pradesh	150	13,100	Under execution

Note: The above list is not exhaustive and only an indicative list of projects

Source: Projects Today, Crisil Intelligence

Key projects in Wastewater treatment sector in India

Sr no	Project	State / Union territory	Capacity	Total cost (Rs Mn)	Status
1	Waste Water Treatment Plant (Ghatkopar)	Maharashtra	337 MLD	36,819.40	Planning
2	Sewage Treatment Plant (Basant Kunj)	Uttar Pradesh	145 MLD	6,710.00	Planning
3	Waste Water Treatment Plant (Worli)	Maharashtra	500 MLD	58,170	Under execution
4	Waste Water Treatment Plant (Malad)	Maharashtra	454 MLD	56,880	Under execution
5	Waste Water Treatment Plant (Dharavi)	Maharashtra	418 MLD 209 MLD (TTP)	46,360	Under execution
6	Waste Water Treatment Plant (Bandra)	Maharashtra	360 MLD	42,933.40	Under execution
7	Sewage Treatment Plants (Hyderabad, South of Musi)	Telangana	480.50 MLD	11,800	Under execution
8	Waste Water Treatment Plant (Versova)	Maharashtra	180 MLD	10,362.10	Under execution
9	Sewage Treatment Plant (Pirana)	Gujarat	240 MLD 160 MLD (TTP)	8445.1	Under execution
10	Sewage Treatment Plant (Vasna)	Gujarat	375 MLD	6,977.70	Under execution

Note: The above list is not exhaustive and only an indicative list of projects

Source: Projects Today, Crisil Intelligence

Recent initiatives across wastewater management

Initiatives	Description
Uttar Pradesh	- Cities such as Agra and Prayagraj have initiated this transition through the preparation of CLRAPs (City-Level Reuse Action Plans (CLRAPs)) - In Prayagraj, four proposed projects worth Rs.16,250 million aim to enable reuse of 126.45 million liters a day (MLD) of treated water, while in Agra, three projects worth Rs.930 million will target the reuse of 28 MLD.
Andhra Pradesh	- Andhra Pradesh government has approved the policy on Reuse of Treated Used Water, 2026, introducing a comprehensive framework for the collection, treatment, allocation, pricing, monitoring and reuse of treated wastewater across all 123 Urban Local Bodies (ULBs). - The policy seeks to transform treated wastewater into a valuable resource for non-potable uses, including industrial use, construction, landscaping, municipal services, parks, road cleaning, fire-fighting, railway yards, bus depots, ports and, agriculture
Delhi Jal Board	On September 2025, The Delhi Jal Board (DJB) has approved a Rs 900 million project to transport treated water from sewage treatment plants (STPs) for horticultural purposes across the national capital
New Delhi Municipal Council (NDMC)	- NDMC issued a Request for Proposal (RFP) for 8 decentralised STPs (capacities ranging from 500 to 1,000 KLD each). - The treated water will be reused for horticulture, fountains, and water bodies to maintain Delhi's green cover and reduce dependence on freshwater sources.
BWSSB has revived Kengeri Lake	- BWSSB has revived Kengeri Lake by filling it with treated wastewater. The lake had dried up due to absence of rainfall in Bengaluru - It further plans to recharge five more lakes and has issued a public disclaimer advising against using the water for potable purposes
Treated wastewater from fish processing plants proposed to be reused by steel rolling mills in Goa	- Treated wastewater discharged by fish processing plants is expected to be utilised for water requirements of steel rolling mills at the Cuncolim Industrial Estate in Goa. This water conservation solution has been suggested by the Goa State Pollution Control Board (GSPCB) - As per a study by GSPCB, seven fish processing plants and exporters together consume about 567 kld (thousand litres per day) and generate approximately 494 kld of wastewater - The steel mills need 749 kld of water every day for cooling, slag crushing, the furnace tank, and other processes
Pune Municipal Corporation (PMC)	- As part of the ongoing JICA-funded Mula-Mutha river rejuvenation project, PMC is laying nearly 50 km of trunk sewer lines across 19 locations to enhance wastewater collection and conveyance to treatment facilities. 18 km completed so far (as of April 2026 update). This directly boosts collection efficiency, reduces untreated sewage flowing into the river, and supports overall pollution control.

Digital and technological initiatives

Digital initiatives	Details
Automatic drain cleaning machines by Bhubaneswar Municipal Corporation	- The Bhubaneswar Municipal Corporation is using automatic drain cleaning machines instead of excavators - They will be utilised owing to advantages such as automatic drain cover removal, silt extraction and a complete shift to mechanical cleaning of drains
Online monitoring stations by Delhi Pollution Control Committee	- The Government of Delhi has started constructing an online monitoring station along Yamuna River and different locations of drains flowing into it - It is being installed by the Delhi Pollution Control Committee. It will help access real-time data on pollutants discharged in the river.
Fully automated vacuum sewer network in Goa	- India's first fully automated vacuum sewer network system was inaugurated in Goa, under AMRUT. It is expected to aid sewage management for more than 200 households in areas with a high-water table, such as Mala and St Inez Creek in Panaji - The project is expected to overcome the geographical constraints of traditional gravity-based sewer systems, such as a high-water table and narrow lanes. It offers advantages such as minimal excavation requirements, fully sealed solution and prevention of groundwater infiltration
Desiltation machinery and monitoring systems	- The Municipal Corporation of Delhi has undertaken a desiltation drive in two phases in 2026, with an overall target of removing 2.3 lakh MT of silt. Of this, 1.4 lakh MT was completed before the monsoon, while the remaining 92,129 MT under Phase 2 is expected to be completed by December. - A dedicated dashboard has been established to monitor the initiative on a daily basis. It enables data uploading of details such as cleaned pipeline lengths and manhole counts, along with photographs as evidence. Also, Google Maps using CAN (Communication area network) numbers with GPS integration is being deployed to record complaints relating to sewage overflow, contaminated water and road silt

Source: Crisil Intelligence

Key growth drivers and challenges of the water treatment, supply and wastewater treatment market of India

Key growth drivers:

Growth drivers	Description
Supporting financial models for industries	- Improved risk allocation through innovative financing models, such as the hybrid annuity model (HAM), which is attracting private sector participation - Diversified funding sources, including international organisations (e.g., the World Bank, the Asian Development Bank and Japan International Cooperation Agency) and government grants and subsidies - Increased private sector participation, driven by the provision of additional funding sources and improved risk allocation
Unlocking revenue potential through reuse	- Implementing regulatory measures to enforce or incentivise the mandatory reuse of treated wastewater in industries - Creating a market for compost from digested sludge, which can provide an additional revenue stream
Integrated water management	- Sharing resources across projects, to increase the scale of operations and reduce costs - Implementing city-wide sanitation and wastewater treatment programmes, to achieve integrated water management and improve overall efficiency - Adoption of energy-efficient technologies, such as variable frequency drive (VFD)-based pumps, which can reduce energy consumption and costs

Growth drivers	Description
Focus on water security	- The government has intensified its focus on water security, with central and state authorities working towards implementing effective and equitable water management systems - The Union government has proposed offsetting up an Integrated Water Resources Management Authority (IWRMA) in each state as part of its vision for a developed India by 2047. A draft model Bill has been circulated to all states for consideration. - The IWRMA is expected to play a crucial role in developing comprehensive water security plans for various administrative tiers, including villages, cities, districts and states. Its responsibilities will also encompass groundwater and floodplain management, and river conservation, all of which are critical components of a robust water management framework National river interlinking plan: The concept of interlinking rivers in India, initiated in the 1980s under the National Perspective Plan (NPP), aims to enhance water security, a critical growth driver for India's economic development. The National Water Development Agency (NWDA), set up in 1982, and the proposed National Interlinking of Rivers Authority (NIRA) in 2021, will play a key role in optimizing water resources, reducing regional disparities, and ensuring a reliable water supply, thereby unlocking sustainable growth and development opportunities.
24x7 water supply	- The Environmental Hygiene Committee has outlined recommendations to facilitate this change, aiming to provide 24x7 water supply to all citizens - Currently, only a handful of cities, including Puri, Malkapur and certain parts of Bengaluru and Delhi, have achieved this milestone, while others like Coimbatore are actively working towards it - The government of Assam laid the foundation stone for the Jorhat 24x7 Water Supply Scheme on December 14, 2024
Deploying technological innovations and energy efficient measures	- Operational efficiency of WTPs/ STPs is being improved through application of energy-saving systems such as VFD-based and other energy efficient pumps - New technologies such as sewer cleaning machines, programmable logic controller (PLC)-based SCADA systems, and sensor-based predictive maintenance are also being deployed
Growing private sector participation	- There is a growing trend of private sector participation in the water management sector, with companies increasingly bidding for government projects under various models such as one city, one operator (under the hybrid annuity model), performance-based contracting and payments - This increased engagement of private players is expected to bring in expertise, efficiency and investment, ultimately enhancing the country's water infrastructure and services
Reduction of NRW	- The government is taking steps to reduce NRW levels by metering the supply lines; AMRUT 2.0 targets to reduce NRW in cities to 20% - Thane Municipal Corporation and Thane Smart City Ltd have installed 105,000 smart water meters in October 2024 across Thane under its Smart Water Meter project

Source: Crisil Intelligence

Key market challenges:

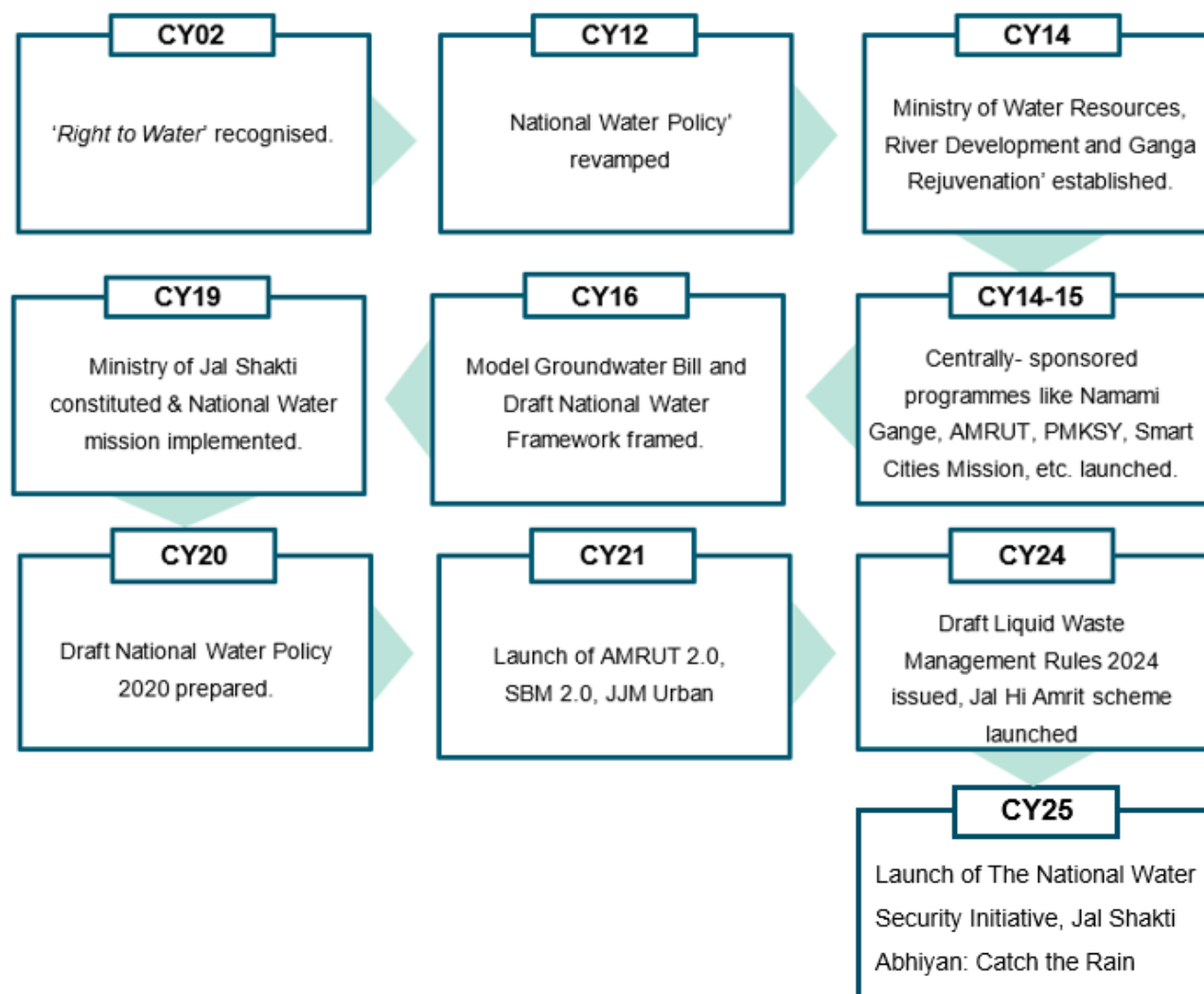
Market challenges	Details
Institutional challenges	- ULBs are primarily responsible for the provision and maintenance of wastewater and water treatment facilities in their administrative area. However, in many cases, they lack the capacity to plan and implement such projects - Performance audit by CPCB in the ‘human power availability in SPCBs’ report (CPCB, 2020) based on category states that the shortage of staff is 37.6%, 39% and 52.3% in the Group A, B and C categories, respectively in the ULBs because of which managing the plant becomes difficult for them - Labs are not well equipped due to a shortage of manpower and procurement delays in instruments, equipment and consumables
Water network and coverage	- Indian cities face significant challenges in providing adequate water supply and sewerage services, with notable deficiencies in network coverage and service quality - Despite their size, even million-plus cities have substantial backlogs, with gaps greater than 20% in network coverage, highlighting the need for infrastructure expansion and upgrading to meet the growing demands of urban populations.
Technical inadequacies of ULBs	- Most ULBs does not have a water meter installed. As a result, they continue with a fixed rate billing system and the meters are unread - As per the CWC, only 20-30% of current water supply is metered, which is leading to losses
Regulatory challenges	- No standards have been set for the ambient water quality for a surface waterbody which is probably on the receiving end of treated or untreated domestic sewage and, thus, misses the goals that need to be set (water quality criteria by CPCB are set based on the uses) - As per the CPCB notified “General Discharge Standards”, a surface waterbody is regulated by 35 parameters, while wastewater for land application (or irrigation) is regulated by 10 parameters, not including heavy metals
Economic challenges	- Cost of STPs increases substantially with more advanced treatments that ensure reduced pollution Hence, the direct economic benefits from the STP derived from the use of treated water in agriculture or fisheries are considerably low - Higher capital and O&M (Operations and Maintenance) costs and cost of utilities are rarely covered by revenue from STPs (may include dried sludge and treated water) due to high uncertainty in demand Thus, smaller towns find it difficult to install STPs of adequate capacity, and the gap increases in cities and towns with lower revenue
Technological challenges	Conventional centralised wastewater treatment plants are designed only to remove biological oxygen demand (BOD), nitrogen (N) and phosphorous. With rapid urbanisation, the nature and type of contaminants are changing, along with the emergence of new challenges. Hence, new technologies that are more efficient in treating water for reuse are required

Source: Crisil Intelligence

Government policies and regulatory framework in India

Evolution of water policies and regulations over the years

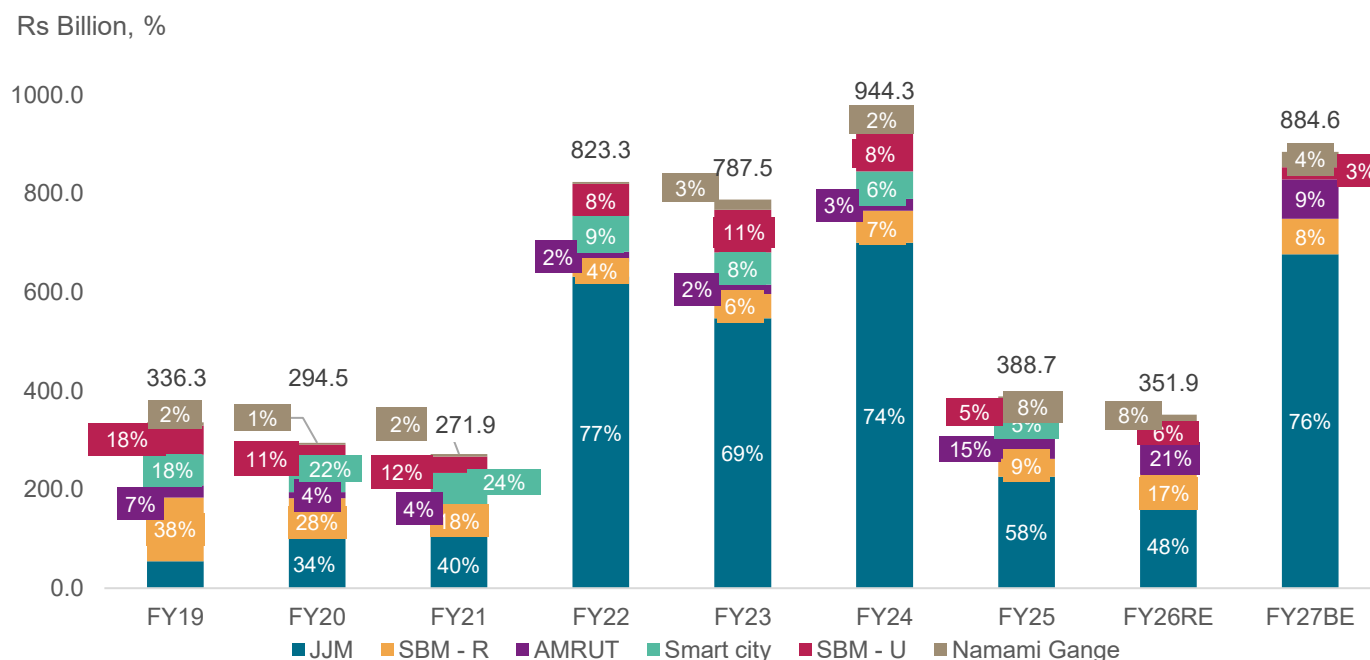
The government has various policies and frameworks that supported the growth of the water management sector in the country.



In India, water management is primarily the responsibility of state governments, with the central government providing technical and financial support. Recognising the importance of water conservation, the government has made it a top priority.

The National Water Mission continues to guide the policy, prioritising water conservation, rainwater harvesting and improving efficiency to ensure long-term sustainability in water resource management. These guidelines aim to build resilient systems that ensure safe drinking water, addressing long-standing issues of competence and capacity in small water systems.

Budgetary allocation across different funds related to WSS sector



Source: India Budget, expenditure profile, Crisil Intelligence

Notes: Till FY22 Namami Gange program was called as National Ganga Plan and Ghat Works; In FY26BE budget for Smart City Mission is not available

RE: Revised Estimates, BE: Budgetary Estimates

Launched on August 15, 2019, the Jal Jeevan Mission (JJM) is a flagship programme of the central government, with the objective of providing functional household tap connections (FHTCs) to all rural households. It aims to improve the lives of rural communities by providing them safe and adequate drinking water and promoting sustainable water management practices.

Jal Jeevan Mission

JJM uses a multi-stakeholder approach, involving the central government, state governments and local communities. It promotes community participation in water management, with a focus on sustainable and equitable use of water resources. It also emphasises on the importance of technological innovations, such as solar-powered water supply systems, to reduce cost and improve efficiency.

The mission has made significant progress with over 74 million FHTCs provided to rural households so far. Community participation in water management is being promoted, with a focus on sustainable and equitable use of water resources. A comprehensive plan has been developed to achieve the mission's objectives, build resilient water supply systems and promote community-led initiatives. It also recognises the importance of community education and awareness about water management to ensure long-term sustainability of water resources.

The mission is being implemented in a phased manner by developing in-village piped water supply infrastructure. Local communities are given help in capacity building and training to ensure their active participation in water management. Community-led total sanitation (CLTS) will help improve the overall quality of life in rural areas.

A comprehensive plan has been developed to achieve the mission's objectives. The mission will continue to work towards achieving its objectives, with a focus on community participation, education and technological innovations.

In short, the highlights of the mission are:

- Providing FHTCs to all rural households
- Promoting community participation in water management
- Ensuring sustainable and equitable use of water resources
- Developing a comprehensive plan to achieve the mission's objectives
- Providing community education and creating awareness about water management
- Promoting technological innovations, such as solar-powered water supply systems, to reduce cost and improve efficiency

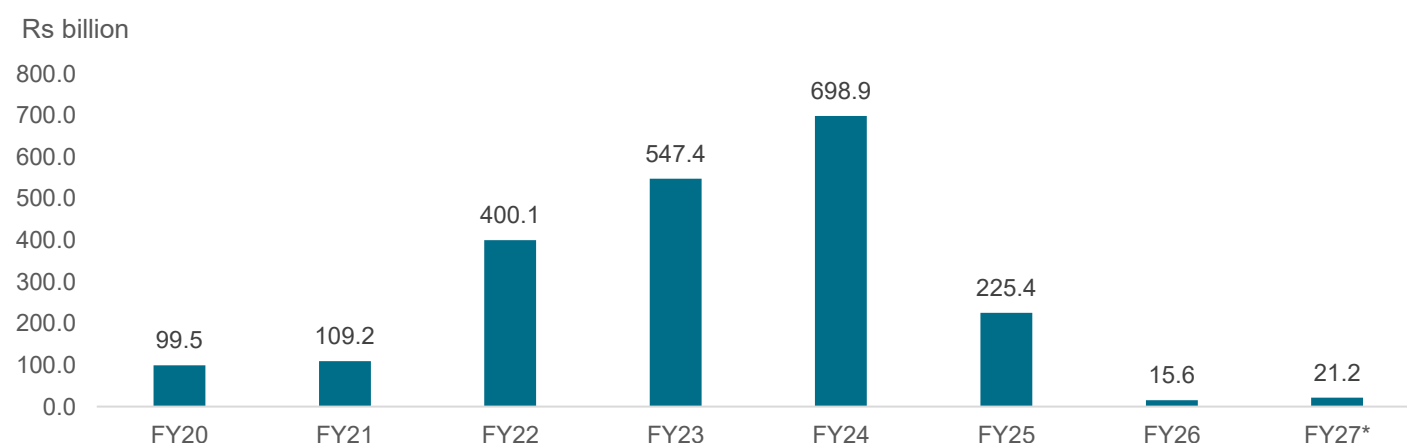
Fund distribution ratio for different states/ UTs

State/UTs	Central share (%)	State share (%)
Himalayan and northeastern states	90	10
Other states	50	50
UT with legislature	90	10
UT without legislature	100	0

Source: JJM toolkit, Crisil Intelligence

JJM's fund distribution ratio varies with states and Union Territories (UT), with Himalayan and northeastern states receiving 90% central funding, other states 50% and UTs without legislature receiving 100% central funding.

Funds drawn by states/ UTs

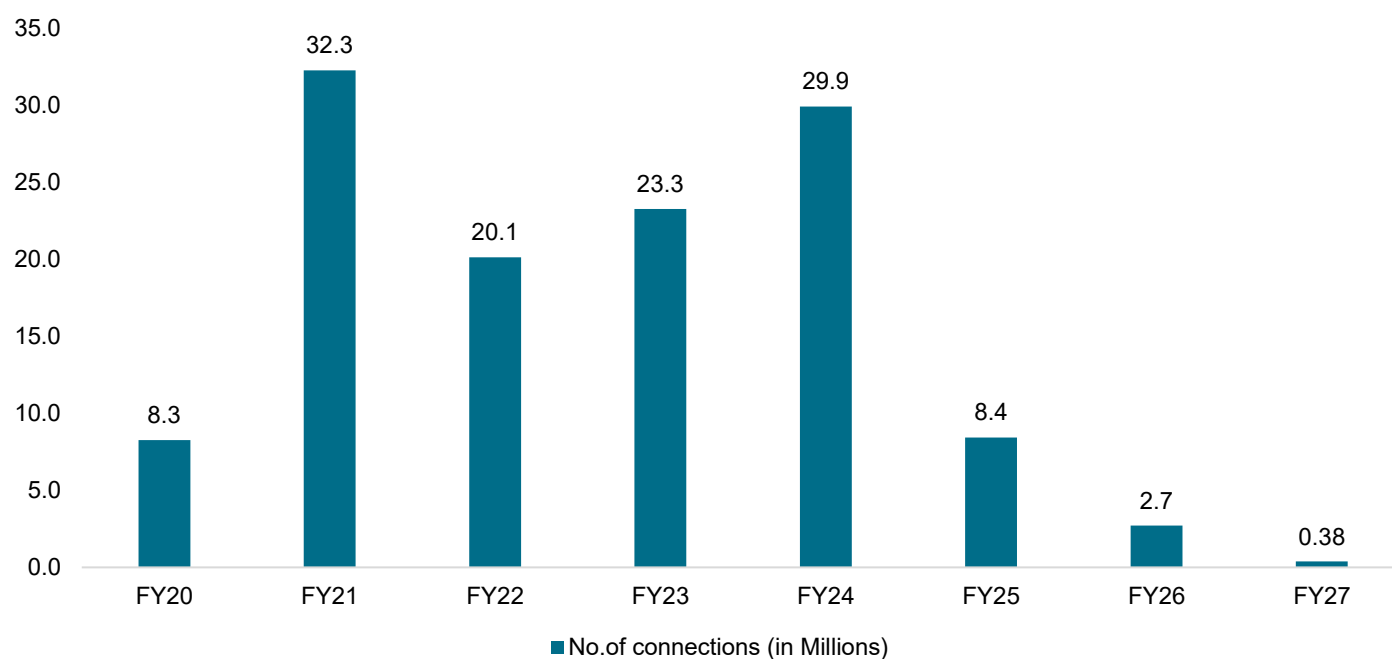


Source: JJM dashboard, Crisil Intelligence

Notes: *FY27 number is as of July 2026

The mission has made significant progress in providing tap water supply to households across the country. Funds utilized by states under JJM have shown a steady increase over the years, indicating a growing commitment to the mission. The trend suggests that the mission is gaining momentum. The increased fund offtake boosted tap water supply to households as there has been a notable increase in connections provided over the years.

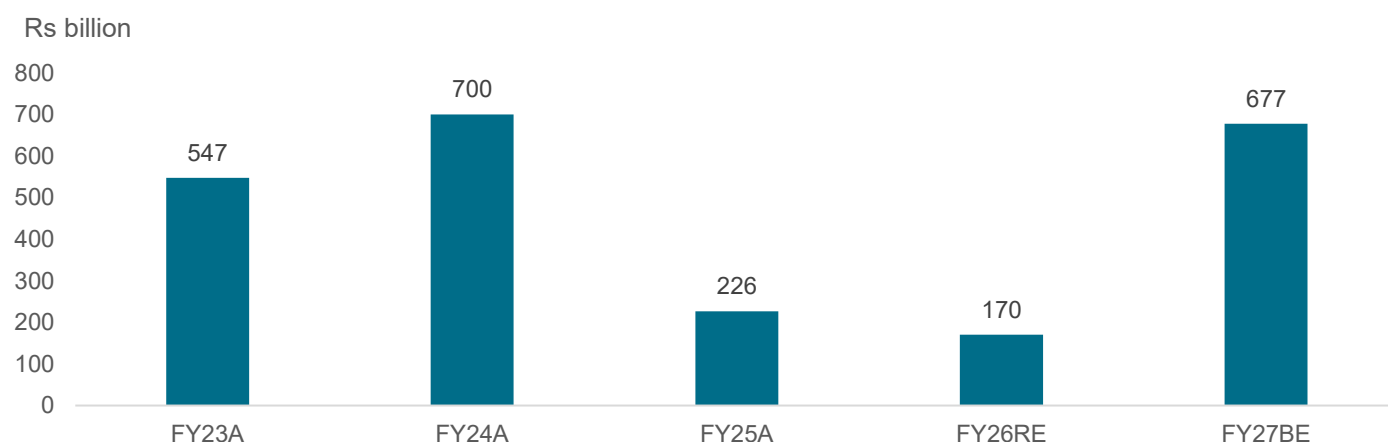
Households provided with tap water supply



Note: As of June 2026

Source: JJM dashboard, Crisil Intelligence

Budgetary allocation for JJM



Note: A: Actual, RE: Revised estimates, BE: Budget Estimates

Source: Ministry of finance, Crisil Intelligence

The substantial budget allocation for JJM, though with some fluctuation over the years, also reflects the government's commitment to providing adequate funding to support the mission's objectives. The funds allocated to are utilised to provide tap water supply to households and to maintain and upgrade existing water supply infrastructure. The steady increase in household connections provided under the mission suggests it is on track to achieve its targets. Overall, the data suggests that JJM is making progress towards its objectives and the government is committed to supporting the mission through adequate funding.

AMRUT 2.0

The AMRUT 2.0 scheme was launched on October 1, 2021, by the Ministry of Housing and Urban Affairs (MoHUA) with the aim of making cities self-reliant and water secure. The scheme is a continuation of the previous AMRUT scheme, which was launched in 2015. It is designed to provide basic services such as water supply, sewerage and urban transport to households and build amenities in cities to improve the quality of life for all citizens, especially the poor and disadvantaged.

The main objectives of AMRUT 2.0 are:

- **Universal piped water supply:** Giving water tap connections to all households to ensure every household has access to clean and safe drinking water
- **Universal coverage of sewerage and septage management:** To provide universal coverage of sewerage and septage management in 500 AMRUT cities, ensuring that every household has access to proper sanitation facilities
- **Promoting circular economy of water:** Recycling and reusing treated sewage, reducing the burden on freshwater resources and minimising the environmental impact of wastewater disposal
- **Rejuvenation of water bodies:** To augment water availability, enhance amenity value and develop green spaces, which will, in turn, improve the overall aesthetic and environmental quality of urban areas
- **Making cities *atmanirbhar* and water secure:** By ensuring they have necessary infrastructure and resources to manage their water needs sustainably

The AMRUT 2.0 scheme has several key components, including:

- **Water supply:** The scheme aims to provide universal piped water supply with household water tap connections, ensuring that every household has access to clean and safe drinking water
- **Sewerage and septage management:** It aims to provide sewerage and septage management in 500 AMRUT cities, ensuring every household has access to proper sanitation facilities
- **Rejuvenation of water bodies:** It seeks to rejuvenate water bodies to augment water and enhance amenity value and develop green spaces, improving the overall aesthetic and environmental quality of urban areas
- **Technology sub-mission:** It will leverage latest technologies in the field of water to improve the efficiency and effectiveness of water supply and sewerage systems.
- **Public-private partnerships (PPPs):** The scheme encourages PPP projects in million-plus cities, with a minimum of 10% of total fund allocation at the city level committed to such project

The AMRUT 2.0 scheme has a multi-level governance structure as follows:

- **State high powered steering committees (SHPSCs):** Headed by the state chief secretaries, SHPSCs monitor and supervise the implementation of the scheme at the state/UT level
- **State level technical committee (SLTC):** Headed by the state secretary of Urban Development and Housing Department, the SLTC provides technical support to the SHPSC in monitoring and supervising the scheme at the State level
- **Apex committee:** The apex committee reviews and monitors the mission periodically
- **Independent review and monitoring agencies (IRMAs):** IRMAs assess and monitor the work done under AMRUT in states/UTs. Funds are released to States/UTs basis compliance reports by these monitoring agencies

Funds distribution ratio:

States/UTs	Central share (%)
Union Territories	100%
Northeastern states and Himalayan states	90%
Cities of states with less than one lakh population	50%
Cities of states with population one lakh to 10 lakh (both included)	On-third of the project cost
Cities of states with population more than 10 lakh	25% of the project funds by the Centre (except for projects taken up under PPP mode) *

Note: PPP projects amounting to at least 10% of total project allocation for all cities with population above 10 lakh in a state will be mandatorily taken up under this scheme

Source: AMRUT 2 guidelines (MoHUA), Crisil Intelligence

The total indicative outlay for AMRUT 2.0 is Rs 2,990 billion, including the total Central assistance of Rs 767.6 billion, for five years (FY22 to FY26). As on January, 2026, so far, 583 sewerage projects worth Rs 66,117.69 crore have been approved by Ministry of Housing and Urban Affairs (MoHUA). Approved projects cover 6,649 MLD sewage treatment capacity (new/augmentation), 65 lakh household sewer connections and laying of 34,548 km of sewer lines. As informed by the cities in City Water Balance Plan on AMRUT 2.0 platform, around 6,535 MLD of treated water is reused by the States in industries, horticulture, agriculture, etc. Another, 1,931 MLD capacity for recycle/reuse is approved under AMRUT 2.0

Tentative distribution of central fund allocation among project components of Mission planned during launch of AMRUT 2.0

Description	Central share (Rs Billion)
Water supply projects	352.5
Rejuvenation of water bodies and developing green spaces & parks projects	39
Sewerage and septage management projects	276
Total tentative central allocation (CA) on projects	667.5

Source: AMRUT 2 guidelines (MoHUA), Crisil Intelligence

Budget allocation under the scheme

Mission component	Allocation (Rs billion)
Projects	667.50
Incentive for reforms (8% of CA allocation)	53.40
Administrative and other expenses (A&OE) for states/ UTs (3.25% of project CA allocation)	21.69
Administrative and Other Expenses for MoHUA (1.75% of project CA allocation)	11.68
Technology sub-mission (1% of project CA allocation)	6.67
IEC activities (1% of project CA allocation)	6.67

Source: AMRUT 2 guidelines (MoHUA), Crisil Intelligence

Jal Hi Amrit scheme: In October 2024, the Jal Hi Amrit (JHA) scheme was launched as an extension of AMRUT 2.0, with the aim of transforming STPs into resource recovery facilities. The JHA programme aims to incentivise states and UTs to ensure the optimal functioning of Used-water Treatment Plants (UWTPs). These plants must consistently meet environmental standards while producing recyclable treated water. As part of this initiative, UWTPs will be awarded clean water credits through a star rating system. Incentives will be provided to urban local bodies (ULBs)/ parastatal agencies based on a comprehensive evaluation process detailed in the following section. Additionally, the JHA programme focuses on enhancing the skills of UWTP operators/ULB officials. Through customised capacity-building programmes, the initiative aims to equip these personnel with the knowledge and expertise needed to manage the facilities efficiently and consistently meet discharge standards.

The AMRUT 2.0 scheme is expected to have several benefits, including:

- **Improved water supply:** The scheme will ensure that every household has access to clean and safe drinking water, improving the overall health and well-being of citizens
- **Better sanitation:** The scheme will ensure that every household has access to proper sanitation facilities, reducing the risk of water-borne diseases and improving the overall environmental quality of urban areas
- **Increased water security:** The scheme will promote the circular economy of water, reducing the burden on freshwater resources and minimising the environmental impact of wastewater disposal
- **Higher aesthetic and environmental quality:** The scheme will rejuvenate water bodies and develop green spaces, improving the overall aesthetic and environmental quality of urban areas
- **Increased economic opportunities:** The scheme will create new economic opportunities in the water sector, including the development of new technologies and industries related to water management

AMRUT 2.0 is a comprehensive scheme aimed at making cities self-reliant and water secure by providing universal piped water supply, sewerage and septage management, and promoting the circular economy of water. The scheme has made significant progress since its launch and it is expected to have a positive impact on the urban life. However, the scheme faces several challenges, including financial, technical, institutional and environmental, which need to be addressed to ensure the successful implementation of the scheme.

Namami Gange Programme

The Namami Gange Programme (NGP), also known as National Mission for Clean Ganga, is an integrated conservation programme launched in June 2014 with the aim to achieve the twin goals of conservation and restoration of the water quality of the Ganga, along with effective pollution abatement.

The initiative has been implemented, taking into account the significant economic, environmental and cultural value associated with the river.

The programme was initially set to run until March 2021, but was subsequently extended to March 2026. The 100% centrally funded programme adopts a hybrid annuity-based PPP model.

The Ganga flows more than 2,500 km through the plains of north and eastern India, with the Ganga basin comprising 26% of India's landmass, making it a key source of livelihood and water for many citizens.

The NPG covers eight states, 47 towns and 12 rivers, comprising the main river and its tributaries.

The second phase of the programme, which runs from fiscal 2021 to 2026, aims to build on the success of the first phase.

The key features of the NGP 2 are:

- Empanelment of agencies to support the preparation of Detailed project reports (DPR)
- Standardisation of the DPRs and instituting trainings ahead of its preparation
- Mapping and monthly monitoring of the drains by the SPCBs
- Characterisation of sludge and its monetisation
- Monthly reports and review of activities to improve monitoring
- Institutional strengthening of the SPMGs by filling up of vacancies
- Stringent monitoring of the DPRs and procurement process
- Strengthening of the DGCs (District ganga committees) through capacity building
- Fixed day, mandated monthly DGCs meetings along with minutes
- Increase participation in Namami Gange programmes – Arth Ganga, etc

To be sure, the programme has made significant progress in achieving its objectives.

The first phase of the programme, which ended in 2021, saw the completion of several key projects, including the creation of sewerage infrastructure, control of industrial pollution and improvement with regard to rural sanitation.

For instance, all 4,465 villages along the bank of the Ganga have been declared open defecation-free and significant reduction in pollution from industries has been achieved. Paper and pulp facilities have installed advanced process technologies, resulting in lower freshwater consumption and wastewater discharge, and zero black liquor discharge. In fact,

the industrial sector has been a key focus area, with CETPs provided to tanneries located along the riverbank to transition to cleaner processes and reduce water consumption.

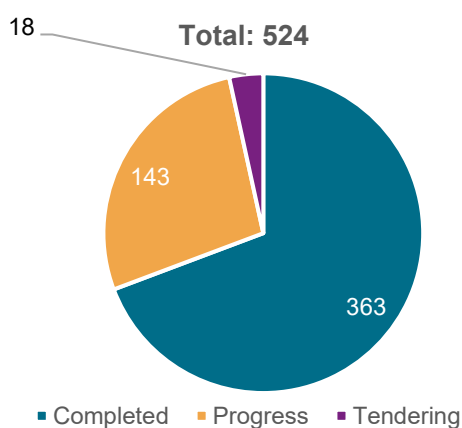
In addition to these efforts, the government has also promoted sustainable agricultural practices, such as organic farming, to reduce pollution and improve the overall health of the Ganga basin. The introduction of new technologies, such as the use of GIS and remote sensing, has helped monitor the health of the river as well. Public awareness and community participation have been crucial components, with initiatives such as Ganga Utsav, which aims to promote awareness and education about the river among the general public, successful in engaging the community. Ganga Amantran, a 34-day river rafting expedition, has also been instrumental in promoting community participation and public awareness.

The programme has also seen significant investment in infrastructure development, including the creation of sewerage, industrial pollution control and rural sanitation infrastructure, which has improved the overall quality of life for people living in proximity to the Ganga basin. Furthermore, initiatives such as Arth Ganga aim to promote sustainable agriculture and reduce pollution in the basin area – this has seen significant success, with the adoption of sustainable agricultural practices by farmers in the Ganga basin, and the reduction of pollution from industrial and agricultural sources.

As the programme moves forward, there are plans to restore the 'wholesomeness' of the river, defined in terms of ensuring continuous flow, unpolluted flow, geologic and ecological integrity, and climatic and spatial understanding. Towards this, the programme will continue to focus on creation of sewerage, industrial pollution control and rural sanitation infrastructure, and will introduce advanced technologies to monitor and further improve the health of the river.

As of July, 2026, a total of 524 projects has been sanctioned at a cost of Rs. 43,030 crores, out of which 363 projects have been completed.

Projects under NGP segregated by status



Note: As of April 2026

Source: NGP dashboard, Crisil Intelligence

Uttar Pradesh has the highest number of projects, totalling 166. The state has also made significant progress, with 117 projects completed. Uttarakhand has made significant progress as well, with 69 projects of a total of 90 completed, representing a completion rate of ~69%.

State-wise NGP project split by status

States	Completed	Progress	Tendering	Total
Uttar Pradesh	117	47	2	166
Uttarakhand	69	21	0	90
West Bengal	58	16	7	81
Bihar	47	19	5	71
Jharkhand	15	4	0	19
Delhi	13	14	2	29
Madhya Pradesh		7	1	8
Haryana	3	1	0	4
Himachal Pradesh	1	1	0	2
Rajasthan	0	1	0	1
Telangana	0	1	0	1
Other projects ¹	40	11	1	52

Notes:

1: Other projects are R&D, study, reports, etc. projects given to institutions

2: Numbers are as July 2026

Source: NGP dashboard, Crisil Intelligence

Still, despite the variations, data suggests that NGP is making progress, in terms of project completion, and with continued efforts, it is likely to achieve the overall objective.

Smart Cities Mission

The Smart Cities Mission is an initiative of the government to promote core infrastructure and quality of life for citizens in cities by ensuring a clean and sustainable environment and the application of 'smart' solutions. The focus is on sustainable and inclusive development, which can be replicated within as well as outside the 'smart city', catalysing the creation of similar smart cities in various regions and parts of the country.

The core infrastructure elements in a smart city include adequate water supply, assured electricity supply, sanitation, efficient urban mobility and public transport, affordable housing, robust IT connectivity and digitalisation, good governance, sustainable environment, safety and security of citizens, and health and education.

The mission involves the strategic components of area-based development, which includes city improvement, city renewal and city extension, as well as a pan city initiative that applies smart solutions to larger parts of the city.

Government funds and matching contribution by the states/ULBs meet only part of the project cost, with the balance funding to be mobilised from various sources, including own resources of the states/ULBs, and via innovative finance mechanisms and private sector participation through PPPs.

The distribution of funds under the scheme is:

- 93% project funds

- 5% administrative and office expenses (A&OE) funds for states/ULBs (towards preparation of Smart city proposals and for Project management consultants, pilot studies connected to area-based developments, and deployment and generation of smart solutions and capacity building)
- 2% A&OE funds for the Mission Directorate and connected activities/structures, research, pilot studies, capacity building, and concurrent evaluation

The Smart Cities Mission also involves convergence with other schemes, such as AMRUT, Swachh Bharat Mission, National Heritage City Development and Augmentation Yojana, Digital India, and other programmes connected to social infrastructure.

By integrating these schemes, comprehensive development can occur, achieving urban transformation and improving the quality of life for citizens. As of May 9, 2025, a total of 7,555 projects—94% of the total 8,067 projects—have been completed, amounting to Rs 1,51,361 crore. Additionally, 512 projects worth Rs 13,043 crore are in the advanced stages of implementation. This amounts to overall 8,067 multi-sectoral projects valued at Rs 1.64 lakh crore.

The Mission received multiple requests from several State and City Government representatives seeking additional time to complete the remaining 10% of projects. These ongoing projects were in advanced stages of implementation but had been delayed due to various on-ground challenges. In the interest of the public, it was important that these projects were completed and contributed to improving the ease of living in urban areas.

Taking cognizance of these requests, the Government of India extended the Mission period up to 31 March 2025 to facilitate the completion of the remaining projects. The extension was communicated to the cities with the stipulation that it would not involve any additional cost beyond the financial allocation already approved under the Mission.

Roads and Highways

Overview of spend on road construction

Road construction investments projected to grow moderately in fiscal 2027 & 2031

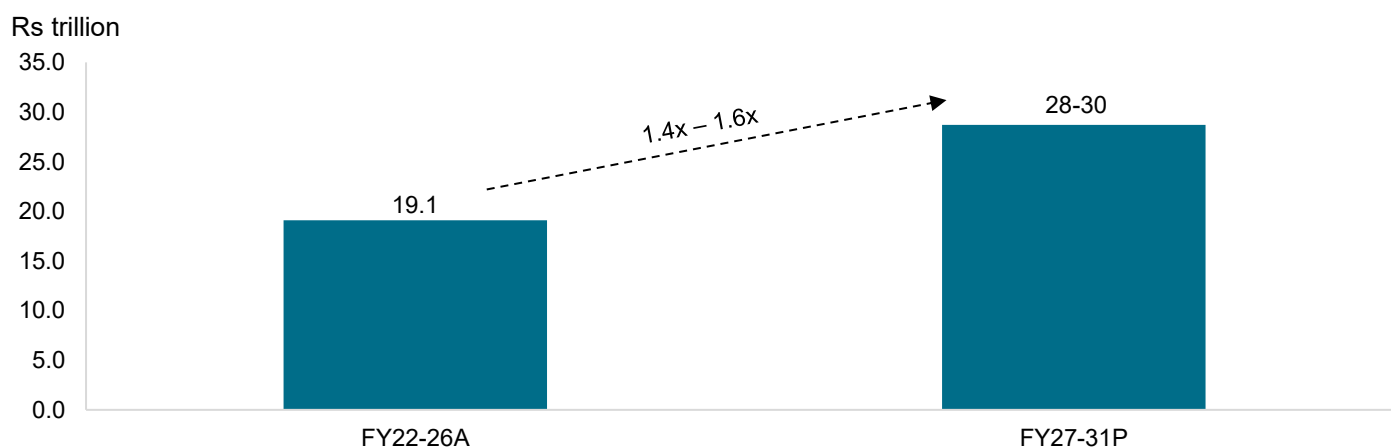
Investment in the road sector grew at an average annual rate of 9% between fiscal years 2021 and 2024, driven by a high number of national highway projects being approved and built. However, in fiscal year 2024, highway awarding dropped by 31%, bringing the total to 8,581 km, thus impacting construction in fiscal year 2025. The drop in awarding continued in FY25 and is expected to continue in FY26 as well. Since road construction usually happens around 18 months after approval, the slowdown in new project awarding will likely affect actual highway construction in fiscal year 2027 & 2028.

However, capex is expected to grow moderately at a CAGR of 8–10% between FY26 and FY28, driven by the government's continued focus on expanding wider, high-capacity highways and developing 20,000 km of High-Speed Corridors (HSCs) over the next five to six years.

Furthermore, with the introduction of a new concession agreement and increased government focus on revitalizing the BOT model, the share of BOT projects and private sector participation is likely to increase.

Additionally, the government is using asset monetization, which involves leasing or selling completed road projects to private companies. This has already shown some success and is expected to help manage debt while ensuring steady investment in road development. The Ministry of Road Transport and Highways has set an asset monetisation target of Rs.300–350 billion for FY27, up from Rs. 283.07 billion in FY26, with the National Highways Authority of India identifying 17 national highway assets spanning 1,692.5 km for monetisation through the TOT and InvIT routes.

Spend on road construction



Note: A: Actual; P: Projected

Source: Crisil Intelligence

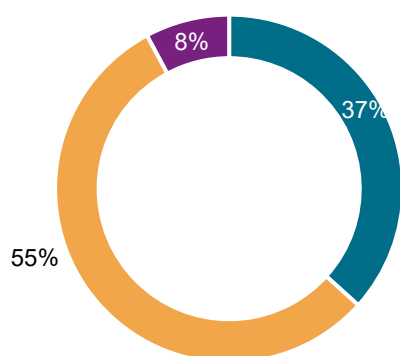
Road construction spends across Rural, State and National highways

According to CRISIL Intelligence, state road capital expenditure is expected to contribute nearly 50% of the sector's total capital outlay in FY26. After remaining largely stagnant in fiscals 2021 and 2022 due to constrained state finances, capital expenditure on roads and bridges by states witnessed strong growth in FY25 and is estimated to have increased by a further 5–7% in FY26. While state budgets for FY26 indicate an overall rise in capital outlay, allocations towards roads and bridges have remained broadly unchanged, suggesting that spending on this key infrastructure segment may be approaching a plateau.

State roads—which include state highways, major district roads, and rural roads outside the ambit of the Pradhan Mantri Gram Sadak Yojana (PMGSY)—account for over 20% of India's road network and carry approximately 40% of the country's road traffic. These roads play a critical role in supporting the economic development of semi-urban and rural regions, while also facilitating industrial activity through the efficient movement of raw materials and finished goods between production centres and hinterland markets.

% Spend split in road construction

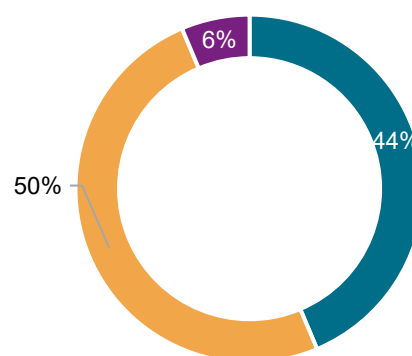
% road construction split (FY21)



■ National Highway ■ State Road ■ Rural Road

Source: State budget documents, Crisil Intelligence

% road construction split (FY26)



■ National Highway ■ State Road ■ Rural Road

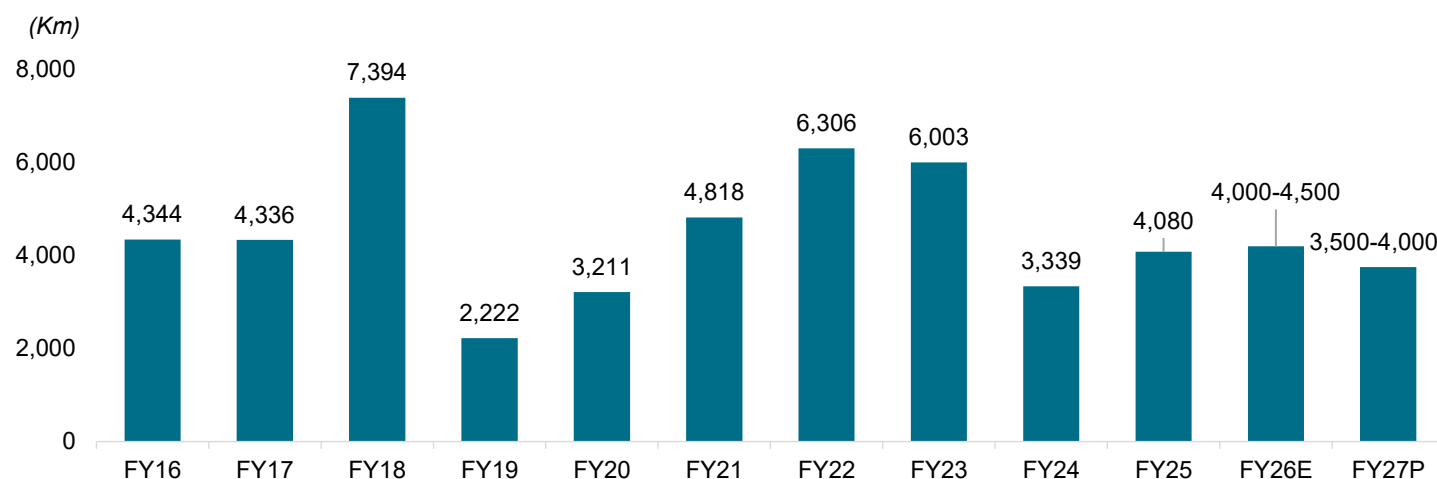
Source: State budget documents, Crisil Intelligence

Overview of NHAI awarding and construction pace

NHAI awarding revives in fiscal 2025 with the revamped BOT model likely to account for a sizeable share

National Highways Authority of India (NHA) awarding had witnessed a rise from merely 2,222 km in fiscal 2019 to 4,080 km in fiscal 2025. However, in fiscal 2024, awarding momentum was marred by various roadblocks. NHA's flagship Bharatmala Pariyojana Programme (BMP) Phase-1 witnessed significant cost overrun on account of costlier land acquisition and high inflation. The estimated cost of the BMP phase-1 increased almost twice than the initial estimate and the ministry sought cabinet approval for a revamped programme and additional funds in order to undertake rapid awarding of projects in the pipeline. NHA awarding was ~ 3,339 kms in fiscal 2024 and in fiscal 25 it has reached~4,080 kms primarily driven by a surge in Q4FY25 after initial delays

National highways - Year-wise total length awarded (km) by NHAI



Note: E - Estimated; P - Projected

Source: Crisil Intelligence

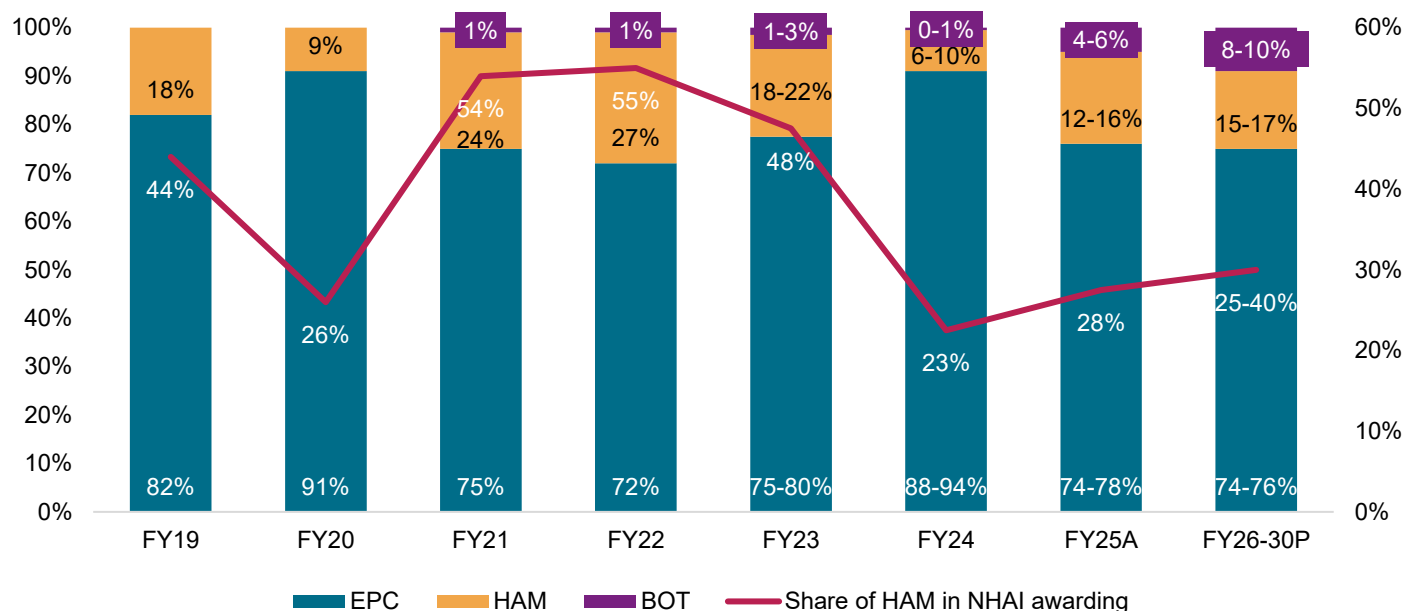
Share of BOT in NHAI awarding to be around 4-6% in fiscal 2025 on the back of amendments in the BOT MCA

Indian road and highway sector has also undergone significant changes in the mode of project execution over the years. Between 2007 and 2014, build-operate-transfer (BOT) projects accounted for ~50% of total project awards, indicating their popularity during that period. However, post-2014, the popularity of BOT projects declined due to various challenges such as aggressive bidding, unrealistic traffic projections, land acquisition delays and disputes, which led to project failures and non-performing assets (NPAs) for banks. In response to these challenges, the government introduced the hybrid annuity model (HAM) in 2016, which subsequently became a popular mode of execution. HAM allowed for a more balanced risk-sharing mechanism between the government and private developers, making it a more attractive option for investors.

However, in fiscal 2025, the share of BOT projects ticked upwards, driven by favourable changes made in the model concession agreement (MCA) for developers. The MCA amendments have made BOT projects more attractive to developers, and the share of BOT projects is forecast to rise to 8-10% in the near future. This is also driven by a strong pipeline of projects and further amendments in the MCA, which are expected to make BOT projects more viable and attractive to investors.

The resurgence of BOT projects is a positive development for the sector since it indicates a renewed interest in private sector participation and investment in road and highway development. The government's efforts to revamp the MCA and make it more favourable for developers has paid off, and the sector is expected to benefit from increased private sector investment and participation.

Share of EPC, BOT & HAM in highway awarding (%)



Note: A - Actual; P - Projected

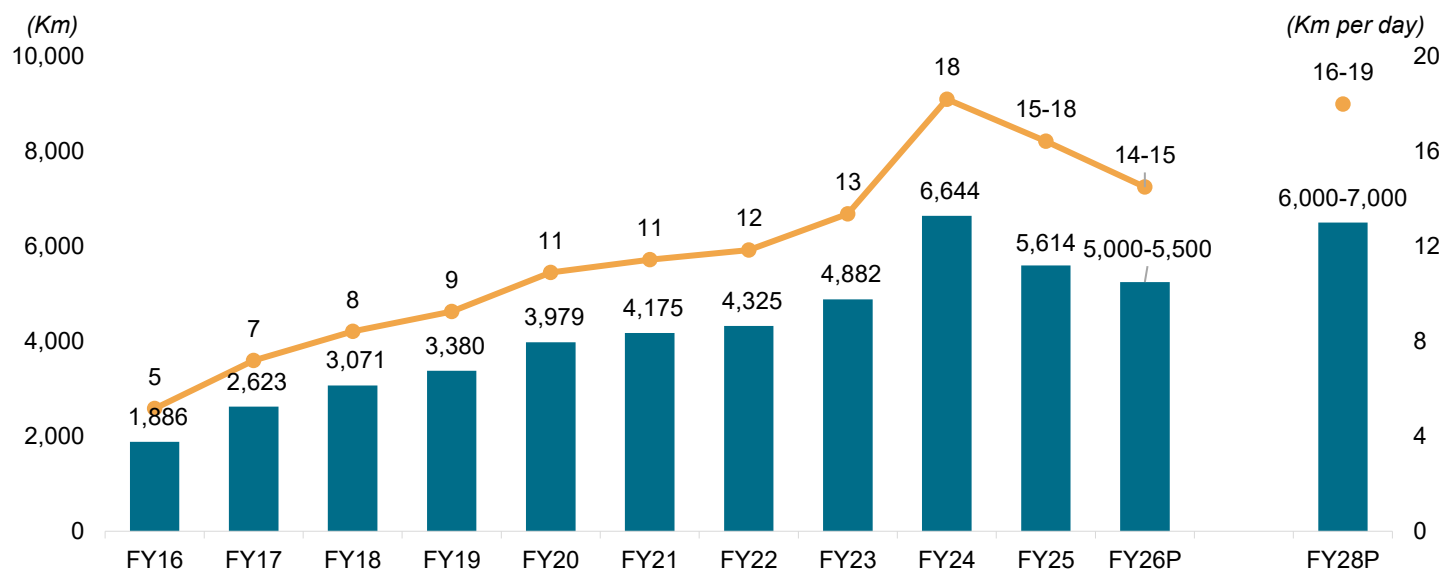
Source: Crisil Intelligence

NHAI execution is also rising steadily with focus on swifter execution

Even though overall national highways construction at the MoRTH level had remained flattish in fiscals 2022 and 2023, NHAI execution witnessed strong momentum. NHAI execution sequentially rose from 4,175 km in fiscal 2021 to 5,614 km in fiscal 2025. Acceleration in project awards, sharper focus on resolving land acquisition issues, and the 'Atmanirbhar Bharat' initiatives to ease liquidity (monthly milestone payments, release of retention money, reduction in performance security & extension of 3-6 months in milestones & SCODs) for EPC road players augured well for the pace of execution of NHAI projects.

Higher awarding of the previous years (FY21-23) and many of those projects receiving appointed dates in a timely manner have further boosted NHAI execution in fiscal 2024. As a result, 6,644 km of NHAI projects were executed during the year. In other words, the construction per day stood at around 18 km. Given the healthy orderbooks of the developers, the momentum in the pace of execution is likely to continue in fiscal 2026 as well. NHAI constructed 5,614 km of National Highways against the target of 5,150 km for the year. Over the medium term, the pace of construction is expected to rise steadily to reach ~19 km per day by fiscal 2028.

National highways - Total length constructed/ upgraded (km) by NHAI



Note: ; P - Projected

Source: Crisil Intelligence

Key highway projects in India

Sr no	Project	State / Union territory	Length (km)	Total cost (Rs Mn)	Status
1	Pavnar-Patradevi Maharashtra Shaktipeeth Expressway Project	Maharashtra	805	863589	Planning
2	Outer Ring Road (Amaravati) Project	Andhra Pradesh	189	649100	Planning
3	Expressway (Raxaul to Haldia Port) Project	Bihar	719	600000	Planning
4	Pavnar-Patradevi Maharashtra Shaktipeeth Expressway	Maharashtra and Goa	805	8,63,589	Planning
5	Gorakhpur-Siliguri Expressway Project [Package-III]	Uttar Pradesh, Bihar, West Bengal	519	386450	Planning
6	Chambal Expressway (Kota-Etawah) Project [Atal Progressway]	Rajasthan, Madhya Pradesh & Uttar Pradesh	409	236450	Planning
7	Versova-Virar-Palghar Sea Link Project	Maharashtra	43	8,74,272	Under Implementation
8	Expressway (Raxaul to Haldia Port) Project	Bihar, Jharkhand & West Bengal	719	600000	Under Implementation

Sr no	Project	State / Union territory	Length (km)	Total cost (Rs Mn)	Status
9	Expressway (Somnath-Dwarka) Project	Gujarat	680	571200	Under Implementation
10	Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg	Maharashtra	701	553350	Under Implementation
11	Expressway (Pune-Bengaluru) Project	Maharashtra & Karnataka	745	500000	Under Implementation

Note: The above list is not exhaustive and only an indicative list of projects

Source: Projects Today, Crisil Intelligence

Review of budgetary allocation for the road industry

Bharatmala Pariyojana

Launched in 2017, the Bharatmala Pariyojana envisages development of about 26,000 km length of Economic Corridors, which along with Golden Quadrilateral (GQ) and North-South and East-West (NS-EW) Corridors are expected to carry majority of the freight traffic on roads. It also envisages development of ring roads / bypasses and elevated corridors to decongest the traffic passing through cities and enhance logistic efficiency. As on Feb 2025 projects covering a total length of 26,425 km have been awarded and out of this, 19,826 km have already been constructed. Further network of 35 Multimodal Logistics Parks is planned to be developed as part of Bharatmala Pariyojana, with a total investment of about Rs 460 billion, which once operational, shall be able to handle around 700 million metric tons of cargo.

There are six key features of the program:

- **Economic Corridors:** Integrating the economic corridors facilitates larger connectedness between economically important production and consumption centers.
- **Inter-corridor and Feeder routes:** Inter-corridor connectivity would ensure first mile and last mile connectivity.
- **National Corridor Efficiency Improvement:** Through this, the greater actionable goal is to undertake lane expansion and decongestion of existing National Corridors.
- **Border and International connectivity Roads:** Better border road infrastructure would ensure greater manoeuvrability, while also boosting trade with neighbouring countries.
- **Coastal and Port connectivity roads:** Port led economic development is further boosted through connectivity to coastal areas, encouraging both, tourism and industrial development
- **Green-field Expressways:** Expressways with higher traffic congestion and choke points would benefit from green field expressways.

The objective of the Bharatmala Pariyojana program is to optimize the efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through development of Economic Corridors, Inter Corridors and Feeder

Routes, National Corridor Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads and Green-field expressways. Identification of the project stretches under the components of the proposed program is based on detailed Origin-Destination (O-D) study, freight flow projections and verification of the identified infrastructure gaps through geo-mapping.

Bharatmala Phase-I:

Construction of a total length of about 24,800 kms is being taken up under Phase-I of Bharatmala Pariyojana. In addition, Phase-I would also include 9 Bharatmala- optimizing the efficiency of movement about 10,000 kms of residual works of National Highway Development Project (NHDP).

The Public Investment Board (PIB) recommended the proposal during its meeting held on 16 June 2017. Cabinet Committee on Economic Affairs (CCEA) approved the Bharatmala Phase-I in October 2017. Total aggregate length of 26,425 km with a total capital cost of ` Rs 8,536.56 billion has been approved and awarded till date under Bharatmala Pariyojana (including 6,758 km length of residual NHDP). No further projects are now being taken up under Bharatmala Pariyojana.

The status of various components of Bharatmala Pariyojana as on 30 November 2025 is as under (Latest available):

Component	Length (in km)	Total Length Completed (in km) Up to 30.11.2025
Economic Corridors	8,737	6896
Inter Corridors Roads	2,889	2,397
Feeder Roads	973	702
National Corridors	1,777	1,516
National Corridor Efficiency Improvement	824	767
Expressways	2,422	1,994
Border Roads & International Connectivity Roads	1,619	1,466
Coastal Roads	77	72
Port Connectivity Roads	348	154
Balance Road Works under NHDP	6,758	5,633
Total – Bharatmala	26,425	21,597

Source: MoRTH annual report, Crisil Intelligence

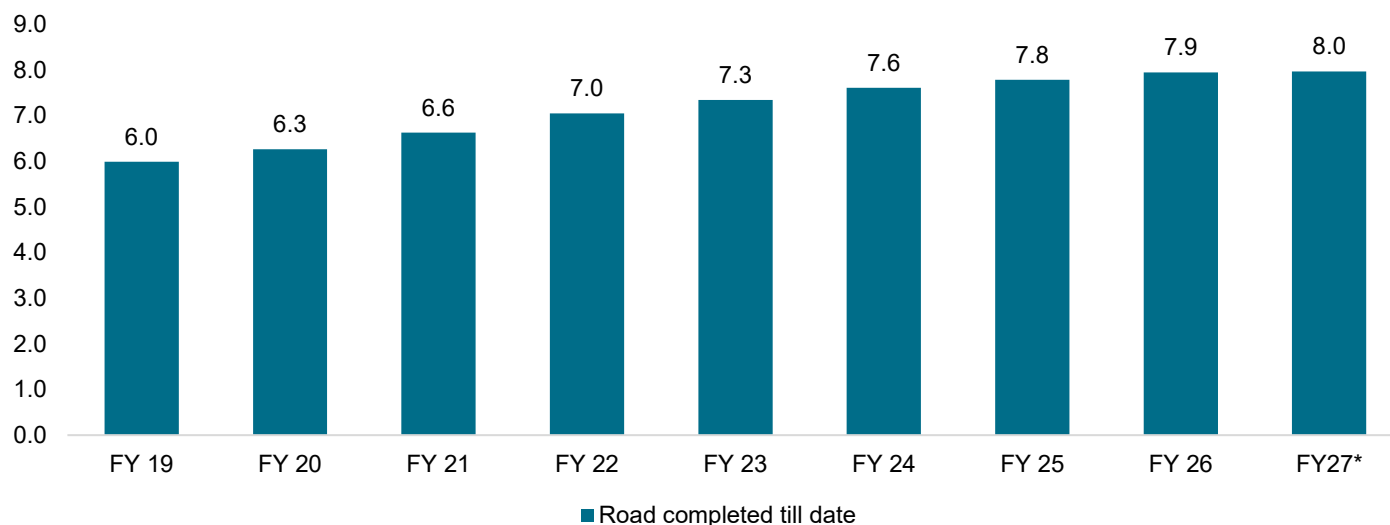
Pradhan Mantri Gram Sadak Yojana (PMGSY)

The Pradhan Mantri Gram Sadak Yojana (PMGSY) is a flagship program aimed at providing rural connectivity by constructing all-weather roads to unconnected habitations with a population of 500 persons and above in plain areas, as per the 2001 Census. The program has undergone several phases, with PMGSY-II and PMGSY-III launched in 2013 and 2019, respectively, to upgrade existing rural roads based on their economic potential and role in facilitating rural market centers and hubs. PMGSY-II focused on consolidating 50,000 km of existing rural road networks, while PMGSY-III targeted the construction of 125,000 km of roads.

The Government has recently approved Phase IV of PMGSY, which aims to provide all-weather road connectivity to 25,000 unconnected habitations with a population of 500+ in plain areas, 250+ in North-East and Hill States/UTs, and special category areas, as well as 100+ in Left Wing Extremism (LWE) affected areas. This phase proposes to construct 62,500 km of road length at a cost of Rs 701.25 billion between 2024-25 and 2028-29. 21,815 km have been added during FY25 and 12,708 km in FY26 till January under different PMGSY interventions. As of July, 2026, a total of 8,56,346 km of road length has been sanctioned under various PMGSY interventions, with 7,96,753 km already completed and upgraded.

As of July 2026, progress of each phase is notable, with PMGSY-I achieving a completion rate of 99%, having sanctioned 644,738 km and completed 625,506 km. PMGSY-II has also shown significant progress, with 49,778 km sanctioned and 49,130 km completed. PMGSY-III has completed 122,056 km out of the sanctioned 108,650 km. Overall, the PMGSY has made significant strides in providing rural connectivity, with a substantial portion of the targeted road length already completed and upgraded.

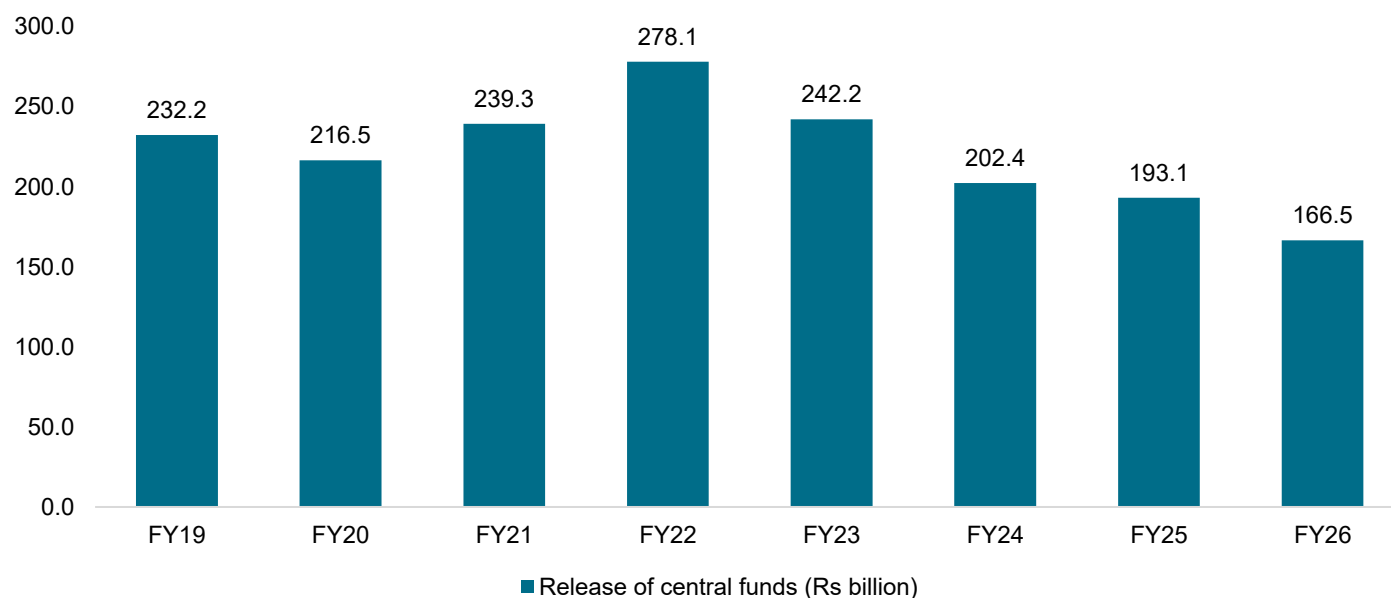
Incremental progress of Road length completed under PMGSY (In Lakh Km)



Note: *As of July 2026

Source: PMGSY Dashboard, Crisil Intelligence

YoY financials incurred in all PMGSY scheme



Source: As of July 2026 , Crisil Intelligence

Special Accelerated Road Development Programme for North East (SARDP-NE)

The Special Accelerated Road Development Programme for the North Eastern region (SARDP-NE) is a government initiative launched in 2005 to expedite road construction in the region. The program has three primary objectives: to develop interstate connectivity, to establish access and connectivity to international borders, and to create connectivity to district headquarters from the nearest national highways.

Furthermore, SARDP-NE aims to upgrade national highways connecting state capitals to 2/4 lanes, provide connectivity to district headquarters in the North Eastern Region (NER) with at least 2-lane roads, and improve road connectivity to backward and remote areas to boost socio-economic development. The program also focuses on improving roads of strategic importance in border areas and enhancing connectivity to neighboring countries.

Under SARDP-NE, a total of 5,468 km of road works have been sanctioned in the Arunachal Package of the North Eastern Region (NER), with a total cost of Rs 635.42 billion. The central government has proposed an allocation of Rs 194.99 billion in the Union Budget 2025-26 for road development in the North Eastern region under the Special Accelerated Road Development Program. The amount of Rs 110.00 billion is earmarked for the Special Accelerated Road Development Program (SARDP) for North-Eastern Areas financed from the National Investment Fund, and Rs 84.99 billion is proposed under SARDP for NER.

The NIF was created in 2005 and receives proceeds from disinvestments of public sector enterprises. The fund is also used to finance the Special Accelerated Road Development Programme in North East (SARDP-NE). In 2026-27, Rs 183.61 billion is budgeted to be transferred from the NIF. This is 84% higher than the revised estimates for 2025-26. The entire amount will be spent on SARDP-NE

The status of works taken up under SARDP-NE as on 30th November, 2025 is as under:

Total Length sanctioned (in km)	Length Completed (in km)
5,998 (Original: 6,418)	5,859

Source: MoRTH annual report, Crisil Intelligence

Key growth drivers and challenges for the road construction sector

Key growth drivers:

Growth driver	Description and reasoning
Road Network Expansion	The Bharatmala Initiative is a crucial part of this effort, which involves executing projects across various categories, including Economic Corridors Development, Inter-corridor and Feeder Routes Development, National Corridors Efficiency Improvement, Border and International Connectivity Roads, Coastal and Port Connectivity Roads, and Expressways. A total of 64,987 km of road length has been identified for execution under this initiative, which will be developed across these categories to enhance the country's road network As per MoSPI – PAIMANA, Number of projects under construction in Roads and Highways are 1,120 as of March 2026 with an estimated cost of INR 10.7 trillion
Road Connectivity expansion in North-East Region	The Central Government has undertaken numerous road and transport infrastructure development projects in the North Eastern Region (NER) through its concerned Ministries and Departments. The region-wise details of National Highway (NH) projects in the Northeastern states, including Assam, Arunachal Pradesh, Nagaland, Manipur, and Tripura, as well as the Bodoland area The length of National Highways (NH) in NER has increased from 10,905 Km in 2014 to 16,207 Km as on March 25. Also in the last 10 years, under Pradhan Mantri Gram Sadak Yojana (PMGSY), 46,296 Km Rural Roads has been constructed in NER with an expenditure of INR 472.8 billion. The Ministry of Development of North Eastern Region (DoNER) has also sanctioned various projects under the Prime Minister's Development Initiative for North East Region (PM-DevINE), North East Special Infrastructure Development Scheme (NESIDS) – Roads. As of Feb 2026, in NESIDS – Roads a total of 127 projects have been taken and out of which 71 has been completed and 56 is still ongoing.
PM Gati Shakti	PM Gati Shakti is essentially a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects. The 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. PM Gati Shakti 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 to improve connectivity & make Indian businesses more competitive.
Focus on Rural Road Connectivity	The Pradhan Mantri Gram Sadak Yojana (PMGSY) has significantly enhanced rural road connectivity. Under this scheme, 819,391 km of road length was sanctioned, out of which 7,87,520 km (95%) has been constructed. As of December 2025, the total expenditure on this initiative stands at Rs 3,452.88 billions.

Growth driver	Description and reasoning
	Further, the launch of Phase IV of PMGSY to provide all-weather connectivity to 25,000 rural habitations, which have become eligible due to population increase. This next phase will continue the momentum of rural infrastructure development, ensuring that more remote areas gain vital road access, thereby fostering economic growth and improving the quality of life for rural populations.
Increased focus on Road and Bridge Maintenance and Safety	The Ministry of Road Transport and Highways allocates Central Road Infrastructure Fund (CRIF) to State Governments and Union Territories for the development and maintenance of State Roads. Currently, 1,209 State Road projects, spanning approximately 14,369 Km and totalling Rs 370.98 billion, are underway, with completion expected in phases by 2027. To ensure the structural integrity of National Highways and their bridges, the further mandates both visual and equipment-based periodical inspections, evaluations, and monitoring. Structural health monitoring is conducted in real time for critical bridges, and the Indian Bridge Management System (IBMS) has been sanctioned for comprehensive oversight and maintenance of bridges across the entire National Highway network.
National Infrastructure Pipeline (NIP)	NIP outlined in fiscal 2019 by the Government of India had an initial investment target of Rs 111 trillion over fiscals 2020-25. Subsequently, the target has been revised and it currently stands at Rs 147 trillion. NIP is expected to drive infrastructure investments as nearly 50% of projects are currently under construction. Engineering, procurement and construction (EPC) dominates mode of implementation of projects as ~72% of the outlined spends come under this mode. Even though capital spending of Rs 147 trillion might not be completed by 2025, Crisil Intelligence expects 70-75% achievement of these outlined spends, which is expected to give a huge boost to the infrastructure of the country.

Source: NHAI, MoRTH, Rural dashboard, DoNER, Crisil Intelligence

Key market challenges:

The construction industry occupies a pivotal position in the nation's development plans. As of fiscal 2026, construction sector occupies a share of 9% in the overall GVA. Below are the key risks and threats impacting the industry

Market challenges	Description
Time contingency	In construction projects, cost savings and timely performance are crucial concerns for all stakeholders, including owners, contractors, and subcontractors. However, projects can be delayed or stalled due to various reasons, such as land unavailability, funding issues, and incomplete clearances. The allocation of risk determines which party, the owner or the contractor, bears the burden of increased costs in the event of project disruptions.
Risks involved in dealing with governmental agencies	In the construction industry, particularly in infrastructure development, many projects involve government authorities as counterparties. These authorities may be central or state governments, or special purpose vehicles established by governments to address specific needs. As a result, companies operating in sectors, where central or state governments, or special purpose vehicles are the primary payers, often face prolonged working capital cycles due to delayed payments.
Climate Change and Extreme Weather Events	Climate change is leading to more frequent and intense natural disasters, which can cause significant damage to construction projects, disrupt supply chains, and impact worker safety. Additionally, changing weather patterns and rising temperatures can also affect the durability and performance of building materials, requiring companies to adapt their designs and materials to mitigate these risks

Market challenges	Description
Labour Shortages	The construction industry is facing a severe shortage of skilled labourers, which can lead to project delays, increased costs, and compromised quality. This shortage is exacerbated by an aging workforce, lack of vocational training, and a decline in interest in construction careers among younger generations
Increase in competition	The construction industry is highly fragmented as low fixed capital requirement for construction contracts. Capital expenditure is only required for procuring necessary equipment, unlike a manufacturing business, which requires plants and machinery for production. This makes the industry less capital-intensive as compared with other industries, encouraging many contractors to enter the sector.
Possibility of payment delays heightens working capital intensity	EPC contracts which are for longer than one year usually come with cost escalation clauses thereby protecting the contractor from rise in raw material costs. However, interest costs from high working capital will continue to impact profitability. The working capital requirement of construction companies is expected to remain high owing to delayed payments in sectors such as irrigation, power and urban infrastructure projects and disputes with clients. This is expected to lead to increased borrowings and thus higher interest cost and liquidity constrains.
Labour and land acquisition	Land is a critical input for infrastructure projects. In the past several projects have been delayed to inability to acquire required land and clearances. Further, construction work involves skilled and unskilled labour. Construction players struggle with wage increases, which can be attributed to labour shortages and rising inflation. Local job opportunities from government welfare schemes, growth in the overall rural economy and migration of labourers to Gulf countries for better prospects are some reasons that have led to a shortage of construction labourers. To solve the labour issue, construction companies are increasing mechanisation, particularly in the highway projects.
Fluctuations in raw material prices	The construction industry is raw material intensive. Any change in prices of raw materials like steel, cement, bitumen, etc impact the cost of the project. However, the impact is limited to the extent of the proportion of fixed price contracts in a company's order book. Some construction companies also own quarries to ensure constant raw material supply. In the recent times, in fiscal 2024, despite drop in prices for steel , prices for cement and bitumen have been fluctuating and had reached its all-time high. Hence, prices of all three raw materials remain a key monitorable for the sector.

Source: Crisil Intelligence

Assessment of Power sector in India

Overview of construction spends in Indian power sector

Power construction capex to grow 13-15% in FY26 led by push from renewables and T&D

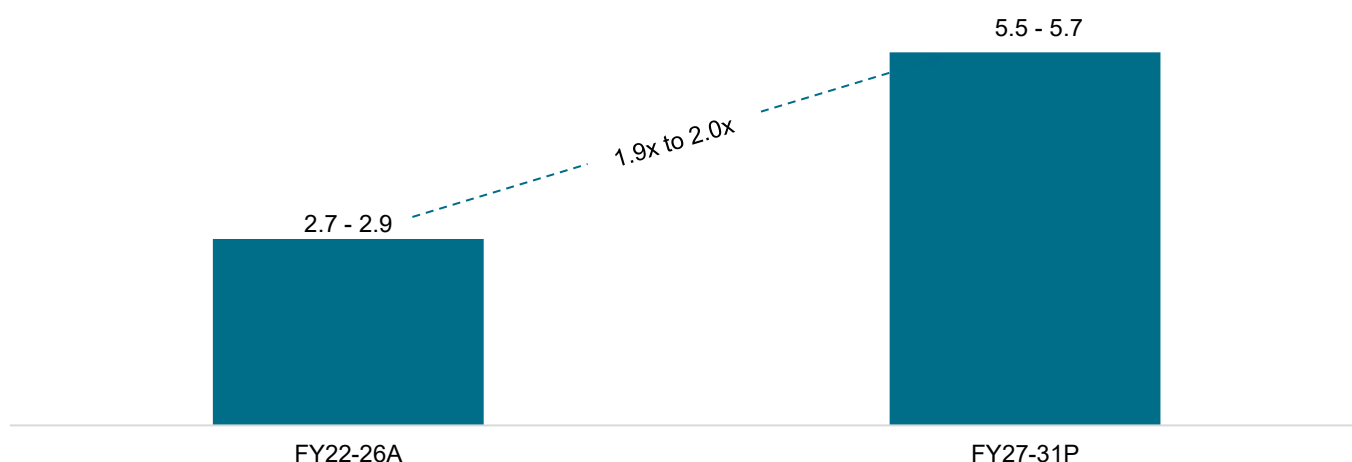
According to Crisil Intelligence, construction spending in the power sector is estimated to have surged by approximately 38% in FY26E, driven by a significant ramp-up in renewable energy capacity additions. The renewable energy sector is projected to record a robust CAGR of around 27% between FY25 and FY28, taking installed capacity to nearly 319 GW. This growth underscores India's accelerating transition towards cleaner energy sources, supported by favourable policy initiatives and continued investments in renewable infrastructure. Going forward, construction spending is expected to moderate to a CAGR of approximately 10–11% during FY27–FY28, as investment intensity is likely to normalize following substantial capacity additions in FY26.

However, it's important to note that the construction intensity in the renewable energy sector is lower compared to that in the conventional energy sector. Renewable energy projects, such as solar and wind farms, typically require less intensive construction efforts and shorter project timelines compared to conventional energy projects, such as coal-fired power plants, which involve more complex and extensive construction processes.

In contrast, the conventional energy sector, particularly in the coal segment, has seen slower capacity additions in recent years. This trend is shifting as the government has recently focused more attention on expanding coal capacity. These new additions are expected to be primarily government-led initiatives aimed at meeting base load requirements, ensuring a stable and reliable energy supply as the country continues to develop. This renewed focus on coal capacity highlights the balancing act between advancing renewable energy and maintaining sufficient conventional energy capacity to support the nation's energy needs.

Power construction capex trend

In Rs Trillion



Source: Crisil Intelligence

Note(s): A: Actual, P:Projected

Investments in Indian power sector

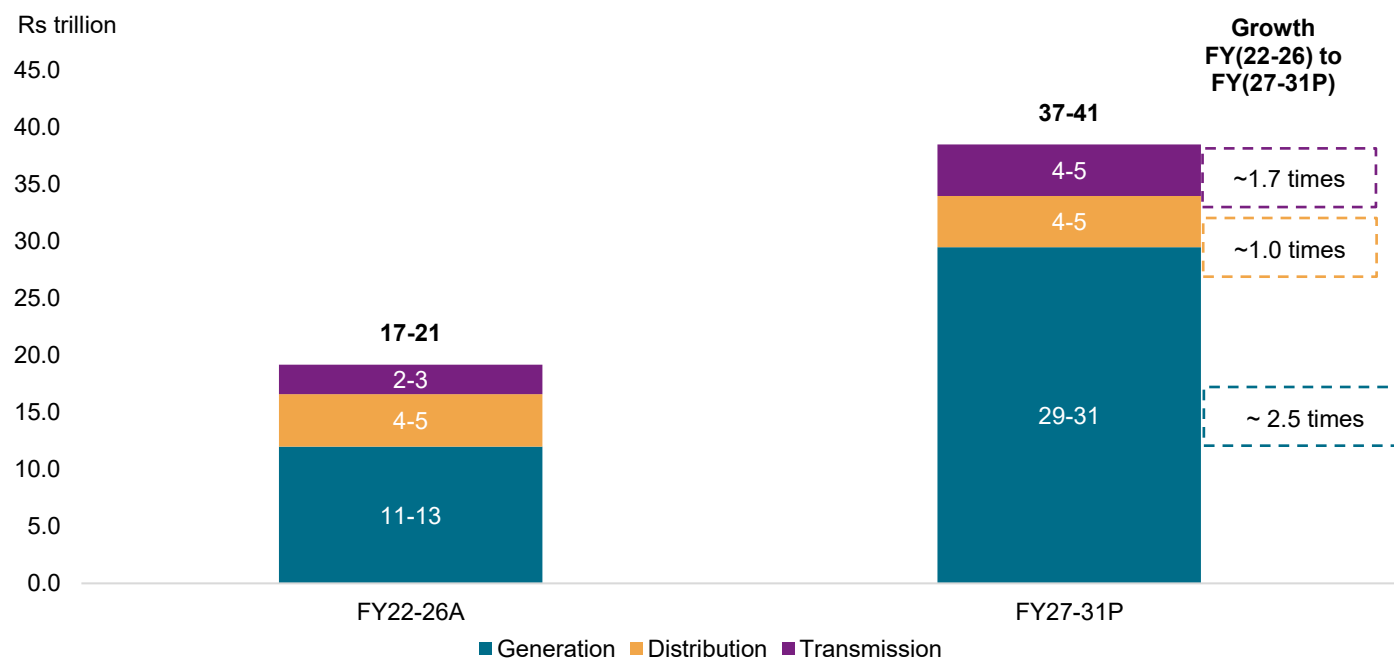
Share of green investments set to rise to ~60% between fiscal 2026-2030 from ~40% between fiscal 2021-2025

Crisil Intelligence projects investments of Rs 37-41 trillion in the power sector between fiscal 2027-2031. Investments in power generation are expected to increase ~2.5 times from Rs 11 - 13 trillion between fiscals 2022-2026 to Rs 29-31 trillion between fiscals 2027-2031. Investments in renewable energy (excluding hydro, pumped storage and BESS) generation capacity are expected to account for 54% of these investments over the same period as India seeks to achieve its 500 GW of non-fossil energy capacity announced in COP26.

To achieve the RE generation target, strong transmission infrastructure is needed so as to integrate large scale RE capacity into the grid. This is expected to lead to transmission investments of Rs 4-5 trillion between fiscals 2027-2031 from ~Rs 2-3 trillion between fiscals 2022-2026 led by upcoming ISTS and InSTS projects.

Additionally, we expect Rs 4-5 trillion worth of investments in the distribution segment between fiscal 2027-2031 driven by upgradation of distribution infrastructure along with installation of smart meters as India focuses on reduction of its carbon emission. .

Segment-wise break-up of total power investments



Note: A: Actual P: Projected, Private sector investments in the distribution are not included

Source: Crisil Intelligence

Investments in generation to be driven by renewable 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 ~2.5x over fiscals 2027 to 2031 compared with fiscals 2022 to 2026

With the introduction of tariff-based competitive bidding (TBCB) in 2006 and anticipated healthy return profile, large private conglomerates invested heavily in generation projects. Capacity additions in the private sector were led by players such as Tata Power, Adani Power, Sterlite Energy, KSK Mahanadi and Lanco Infratech. Lack of adequate long-term power purchase agreements and stretched financials of private developers led to a slowdown in capacity additions and restricted private investments in the generation space until fiscal 2024. However, due to growing importance of coal for servicing baseload power demand along with government support, there has been renewed interest from private players to add coal capacity. As a result, private players are expected to add ~65% of the 35-40 GW of coal additions between fiscal 2027-2031 resulting in higher investment from the sector followed by central and state sector.

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 expenditures 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. .

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

Between fiscal 2027-2031, Crisil Intelligence estimates investment by state power distribution companies to be stable at 4-5 trillion. This comes on the back of higher focus on improvement of financial condition of the discoms by reducing technical & commercial losses. Facilitating renewable energy integration through modern distribution infrastructure and improved

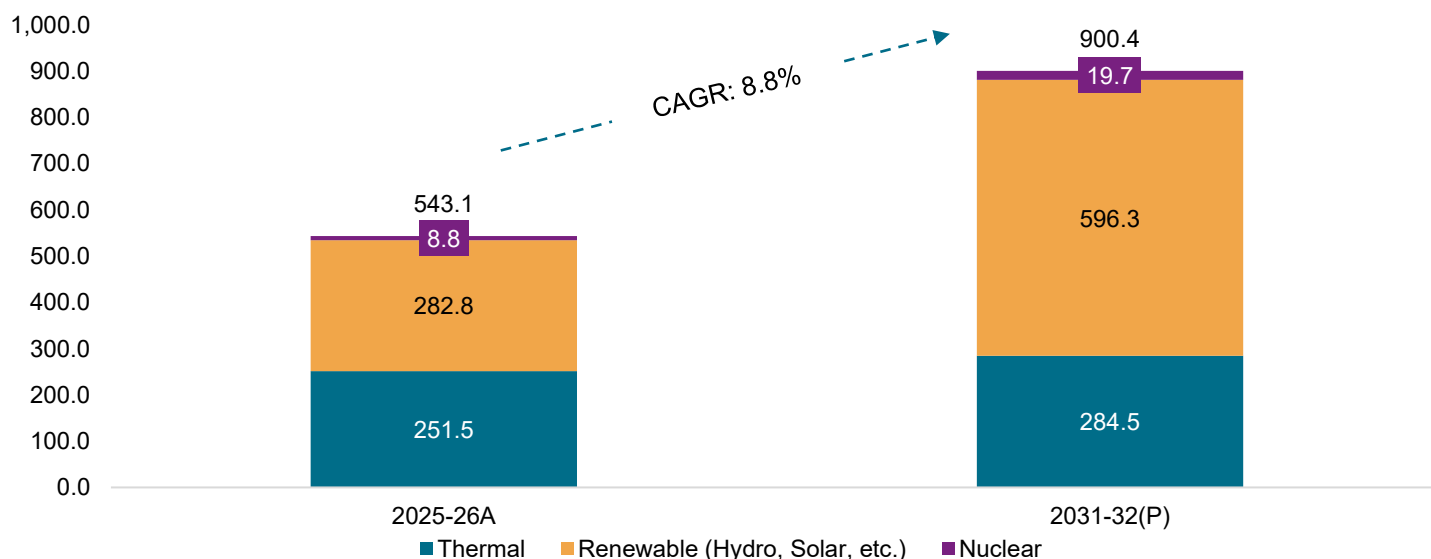
infrastructure resulting in reduced carbon emissions through optimized and efficient energy use are also expected to contribute to India's Net Zero goal by 2070.

For example, the four state distribution companies operating in Gujarat are expected to see a 74% increase in capital expenditure allocated for normal development for the period between fiscal 2026-2030 vis a vis fiscal 2021-2025. This includes work related to new connections, shifting of network and extension/modification of existing connections. Additionally, the state is also expected to see ~192% increase in capital expenditure for system improvement schemes for the period between fiscal 2026-2030 vis a vis fiscal 2021-2025. This includes various activities such as bifurcation of feeders, overhead to underground cable conversion, new link line work, H.T. Aerial bunch conductor, replacement of deteriorated conductor, L.T. Aerial bunch conductor and distribution transformer review.

Overview of power generation capacity in India

Renewable energy to account for ~50% of India's installed capacity by fiscal 2030

Total power generation capacity (in GW) in India



Source: NEP, CEA, Crisil Intelligence

Note: A: Actual P: Projected

India's installed power generation capacity reached a total of 543 GW as of June 2026. Within this overall capacity, coal-based power plants accounted for ~252 GW, of the national capacity mix. Renewable energy sources, including solar, wind, and other non-fossil options, contributed 283 GW.

India's installed generation capacity, which stood at 382 GW at the end of fiscal 2021 reached 475 GW in fiscal 2025 on the back of healthy renewable capacity additions (including solar, wind, hybrid, and other renewable sources) even as additions in coal and other fuels have moderated compared to previous years. As per NEP, Renewable installed base is expected to reach 596 GW by fiscal 2032 on the back of strong renewable capacity additions over fiscals 2027-31. By fiscal 2032, RE capacity is expected to account for 66% of the installed base of 900 GW. As the country shifts its focus away from fossil

generation, coal's share in installed base is estimated to decline to ~35% by fiscal 2032. Other fossil fuels (including lignite, gas, and diesel) are expected to remain stagnant due to negligible capacity addition. Crisil Intelligence estimates India will achieve its Panchamrit target of to reach 500GW 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 5 years. Storage installed capacity, which includes PSP and BESS is expected to reach 50-55 GW by fiscal 2031.

Overview of power demand in India

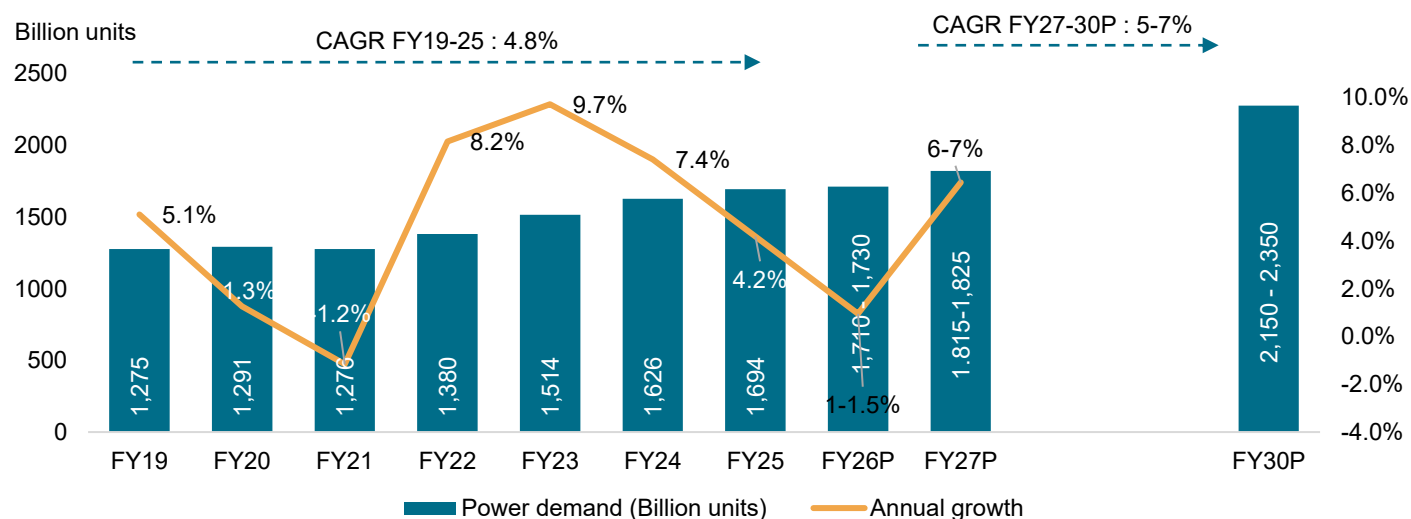
Power demand to maintain healthy momentum slated to grow at 5-7% CAGR over fiscals 2027-2031

Power demand is estimated 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.

Additionally, power demand is closely linked to GDP growth where historically power consumption largely follows economic cycles. In fiscal 2027, GDP is estimated to increase by 6.7% with support from healthy consumption, a supportive monetary policy, the US-India trade deal, and mild pick-up in private investment. The revised tax slabs as well as the increased tax rebate limit have been maintained in fiscal 2027 budget, continuing to support consumption.

In fiscal 2026, Crisil Intelligence estimates power demand to increase by 1-1.5% on year to 1,705-1,715 BU. Steady economic performance, increasing disposable income are expected to be key drivers, while weather vagaries limited power demand growth in the fiscal.

Power demand across years



Source: CEA, Crisil Intelligence
Note: P: Projected,

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 Aatmanirbhar 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.

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.

Long term growth to come from industrial push and temperature vagaries

Industrial and commercial consumers are the largest consumers of electricity in absolute terms. Going forward, India's economy is expected to continue to expand beyond fiscal 2022, with industrial activity gradually picking up over the medium term. Trickle-down effect of Aatmanirbhar Bharat relief package, government spending on infrastructure through the National Infrastructure Pipeline, commissioning of the dedicated freight corridors, expansion of the services industry, rapid urbanization, and increased farm income from agriculture-related reforms are key macroeconomic factors fostering the power demand. Significant policy initiatives such as PLI schemes and low corporate tax rates, among others have aided large scale manufacturing in India which will further boost power demand in the country. In fact, several sectors including automobiles, mobile handsets and tablets, solar, lithium-ion batteries, food & beverages and defence are expected to witness fresh investments including foreign direct investments from global majors.

Further, railway electrification, rapid transition to EVs, increased urbanisation and Industrialisation, smart city projects, upcoming metro projects primary tailwinds providing impetus to power demand. A confluence of these factors is expected to drive energy sales to the industrial and commercial consumer segment.

India's power demand is expected to rise on the back of population growth, rapid urbanization, more electricity connections, and 24x7 supply initiatives, alongside higher cooling needs from intensifying heatwaves that will lift peak demand. On the industrial side, PLI-led manufacturing expansion - including electricity-intensive segments such as semiconductors and batteries- new FTAs, and a growing data-center footprint are likely to accelerate consumption, while new offices and real estate investments should support demand in highly commercialized states such as Tamil Nadu and Karnataka and broader industrial activity in states like Haryana, Punjab, Gujarat, and Tamil Nadu. Additionally, state subsidies/free power for households and agriculture (e.g., free power for farmers in Maharashtra) and infrastructure electrification (railways and metro projects) are expected to further add to demand

Key demand segments split across agriculture, domestic, commercial and industrial segments for power in India (FY26)

		
Industrial and commercial	Domestic	Agriculture
600 – 615 BU	390 – 400 BU	275 – 285 BU

Note: BU: Billion Units

Source: CEA, Grid India, Crisil Intelligence

Industrial and commercial

Industrial power demand is estimated to grow by 2-3% on year in fiscal 2026 on the back of sustained growth in real GDP of 6.7% on year. This outlook is supported by healthy consumption, a supportive monetary policy, the US–India trade deal, a mild increase in private investment, and low crude oil prices.

As per government estimates, India is set to become the world's third-largest economy with a projected GDP of \$7.3 trillion, consequently, aiding power demand from industrial sector.

Domestic

In fiscal 2026, domestic power demand is projected to grow by 0–1% on year, as above-normal rainfall in the first half of the year likely reduced the need for cooling. Crisil Intelligence estimates temperature fluctuations will remain a key factor for this segment, with recent cold waves in north India increasing heating requirements and, consequently, power consumption.

Climate change led to warmer temperature having led to surge in cooling demand with Crisil Intelligence estimating sales of air conditioning (residential) to surge by 9-11% CAGR between fiscal 2025-2030 and penetration increasing to 17-19% from the current penetration level of ~13% as of fiscal 2025

The Draft National Electricity Policy aims to increase per capita consumption from 1,500 units to 2,000 units by 2030. Additionally, state initiatives like the Gruha Jyoti Yojane by the Karnataka Government, which offers free electricity up to 200 units to domestic consumers is estimated to boost power demand in the future.

Agriculture

Power demand from the agriculture sector is expected to witness 1.5-2.5% growth on-year in fiscal 2026 driven by lower irrigation requirement on account of above normal monsoon in H1 fiscal 2026.

In fiscal 2025, demand from the sector is estimated to have increased by 4.7% on year driven by higher than normal temperatures leading to higher irrigation requirement. On the other hand, above normal south west monsoon is estimated to have been a headwind for irrigation usage. For example, the agriculture-dominated states of Madhya Pradesh in western

India and Rajasthan in North India led the dip in demand with on-year declines of ~13% and ~25%, respectively in August 2024. These states had witnessed excess rainfall in August 2024 (~14% and ~44% above average in Madhya Pradesh and Rajasthan, respectively), which most likely drove down power demand for irrigation. Another key agriculture state, Bihar, bucked the trend as it saw demand increase ~2% on-year in August. This could be attributed to district-level rainfall and irrigation needs. For example, Rohtas, a key paddy growing district, experienced ~30% deficit in rainfall on an average in August, which would have likely increased demand for irrigation.

In the medium term, reduced power cuts are expected to drive demand however the segregation of agricultural and non-agricultural feeders and solarization of distribution feeders (installation of small-sized grid connected solar power plants in rural areas to compliment grid power and extend supply hours to agricultural consumers) are expected to limit agricultural power demand. Further, agricultural feeder segregation and network strengthening in rural areas is expected to lower AT&C losses, which currently plagues the agriculture segment.

Key projects in power sector in India

Sr no	Project	State / Union territory	Unit	Total cost (Rs Mn)	Status
1	Nuclear Power (Maharashtra) Project	Maharashtra	5000 MW	2,000,000	Planning
2	Nuclear Power (Purnagad) Project	Maharashtra	7500 MW	2,000,000	Planning
3	Nuclear Power Plant (Barsu)	Maharashtra	6000 MW	1,500,000	Planning
4	Nuclear Power Project	Chattisgarh	4200 MW	800,000	Planning
5	Upper Siang Hydel Power Project	Arunachal Pradesh	11000 MW	414,895	Planning
6	Ultra Supercritical Coal Based Power (Ramagundam)[Telangana STPP, Phase-II]	Telangana	800	413,913	Planning
7	Etalín Hydro Electric Power Project	Arunachal Pradesh	3097 MW	328,130	Planning
8	Ultra Super Critical Thermal Power (Charuabakhra) Project	Assam	3200 MW	480,000	Under Execution
9	HVDC Link (Paradeep-Andaman Power (Kotma) Project	Madhya Pradesh	2400 MW	360,000	Under Execution
10	Jaitapur Nuclear Power Project	Maharashtra	6X1650 MW	330,000	Under Execution
11	Oju Hydro Electric Project	Arunachal Pradesh	8X231.25 MW	313,564	Under Execution
12	Nabinagar Super Thermal Power Project (Stage-II)	Bihar	3X800 MW	299,479	Under Execution
13	Mahi Banswara Nuclear Power Project	Rajasthan	4X700 MW	297,820	Under Execution
14	Coal Based Power (Ramagundam) Project [Telangana STPP, Phase-II]	Telangana	3X800 MW	293,449	Under Execution
15	Talabira Coal Based Power Project [Phase-I]	Odisha	3X800 MW	270,000	Under Execution
16	Transmission System (Rajasthan REZ, Phase-III Part-I) Project	Rajasthan		250,000	Under Execution
17	Nuclear Based Power (Kudankulam) Project [Unit 3 & 4]	Tamil Nadu	1000 MW	398,490	Under Execution

Sr no	Project	State / Union territory	Unit	Total cost (Rs Mn)	Status
18	Yadadri Coal Based Power Project	Telangana	5X800 MW	345,430	Under Execution

Note: The above list is not exhaustive and only an indicative list of projects

Source: Projects Today, Crisil Intelligence

Key budgetary allocation for the power sector

Policies and initiatives of Indian government to boost power sector in India

The Government of India implemented multiple initiatives aimed at ensuring uninterrupted power supply to every household since 2014. Under the Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) introduced in 2014, and the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), introduced in 2017, about Rs 1850 billion has been invested to boost distribution infrastructure across various states. Consequently, 18,374 villages have been electrified under DDUGJY, and 29 million households have gained access to electricity through SAUBHAGYA

Revamped Distribution Sector Scheme (RDSS)

Budgetary allocation towards RLDS increased 15% to Rs 180.00 billion vis-a-vis ~Rs 156.7 billion as per the revised estimates for this fiscal. This scheme targets improving operational efficiency through infrastructural upgrades for electrical equipment and rolling out smart metering across consumer categories. However, implementation has been slow given its large scale, which has led to the sunset date being extended from March 2026 to March 2028; hence, the high allocations in fiscal 2027. As of December 2025, total central grant released under the scheme was ~Rs 370.00 billion, accounting for ~38% of the total sanctioned gross budgetary support. The RDSS is a result-linked evaluation scheme, where DISCOMs must meet the pre-qualifying criteria every year to be eligible for funds under the scheme. Upon the launch of RDSS scheme in 2021, the ongoing projects under IPDS and DDUGY have been subsumed under RDSS

The primary objective of this scheme is to significantly enhance the quality, reliability, and affordability of power supply to consumers by fostering a financially sustainable and operationally efficient distribution sector.

The RDSS has two major components

- **Part A:** Financial support for prepaid smart metering and system metering, and upgradation of distribution infrastructure.
- **Part B:** Training and capacity building, and other enabling and supporting activities

Features under RDSS:

The RDSS allows discoms to access funds under the scheme for prepaid smart metering, system metering, and distribution infrastructure works aimed at loss reduction and modernisation. Financial assistance for distribution infrastructure works is subject to pre-qualifying criteria and minimum benchmarks set for discoms, evaluated based on action plans designed to incentivise fiscally prudent behaviour.

The scheme provides for an annual appraisal of discom performance against predefined and agreed-upon performance trajectories, including AT&C losses, ACS-ARR gaps, infrastructure upgrades, consumer services, hours of supply, and

corporate governance. Discoms must score at least 60% and meet minimum thresholds for key parameters to remain eligible for funding under the scheme in any given year.

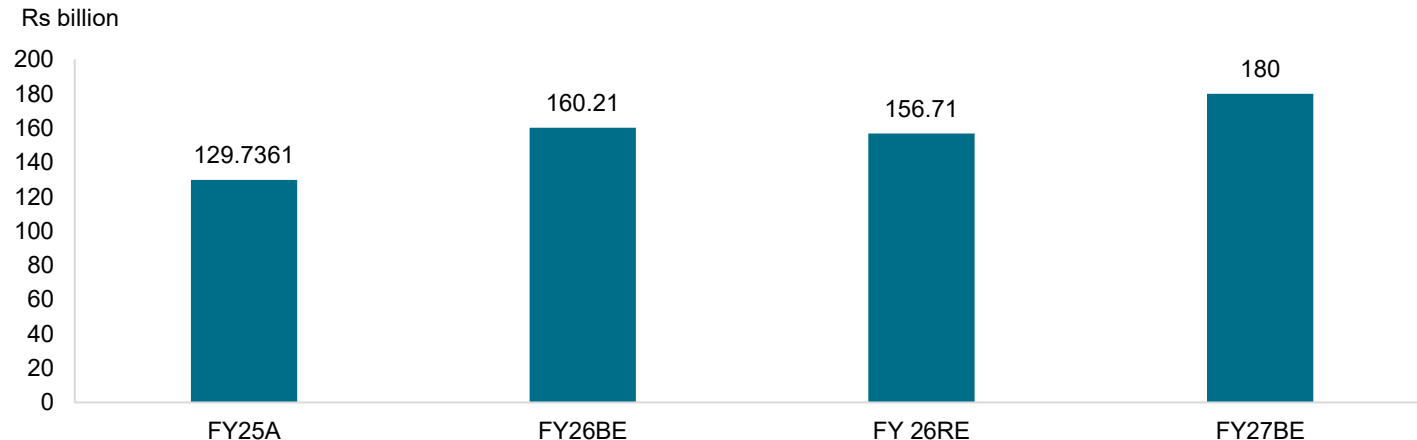
The implementation of the scheme aims to empower consumers through prepaid smart metering, which will be executed in a public-private partnership (PPP) mode, leveraging artificial intelligence to analyse data generated through IT/OT devices. The plan includes system meters and prepaid smart meters to generate system-based energy accounting reports each month, enabling discoms to make informed decisions on loss reduction, demand forecasting, time-of-day (ToD) tariffs, RE integration, and other predictive analyses

Another key focus area of the RDSS is improving electricity supply for farmers by separating agricultural feeders and ensuring daytime electricity supply through convergence with the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM-KUSUM) scheme for the solarisation of agricultural feeders.

Achievements under RDSS scheme:

Under RDSS, smart metering works have been sanctioned for 45 distribution utilities in 28 States/ UTs. This covers smart metering of 197.9 million consumers, 5.3 million Distribution Transformers and 0.21 million feeders. As on July 2026, 128.6 million smart meters have been installed under the scheme, with awarded cost of INR 1,320.7 billion In addition, smart meters have been installed by States under their State plans/ other schemes.

Budget estimates and actuals for RDSS:



Note: A- Actual, BE- Budget Estimate, RE- Revised Estimate

Source: India Budget, Crisil Intelligence

Integrated Power Development Scheme (IPDS)

It aims to enhance the transmission and distribution networks throughout India. The scheme focuses on reducing AT&C losses, implementing IT-enabled energy accounting and auditing systems, improving billed energy based on metered consumption, and enhancing collection efficiency. The scheme primarily focuses on urban areas, including the strengthening of sub-transmission and distribution networks, provision of solar panels on government buildings, metering of feeders, distribution transformers, and consumers, as well as IT enablement of the distribution sector. IPDS projects after this has been included under RDSS scheme

Details of works executed under IPDS :

Project Name	No. of Project Areas (Discom / Zone / Circle)	Towns Covered	Approved Project + PMA Cost	Total GoI Grant Approved	Total GoI Grant Released
IPDS System Strengthening	510	3634	284,949.3	178,257.2	163,583.6
IPDS IT Phase-II	34	1609	7,313.5	4,531.1	3,264.8
ERP	0	0	6,844.9	4,393.3	3,359.6
Smart Metering	0	0	2,285.5	1,443.7	812.4
RT-DAS	0	1451	1,206.2	781.1	639.3
GIS	58	73	8,139.6	5,298.8	4,499.1
Total	610	6,767	310,739.0	194,705.2	176,158.8

Note: Cost and Grant mentioned are in Rs Millions

Source: IPDS Dashboard, Accessed on July 2026

Battery energy storage systems (BESS):

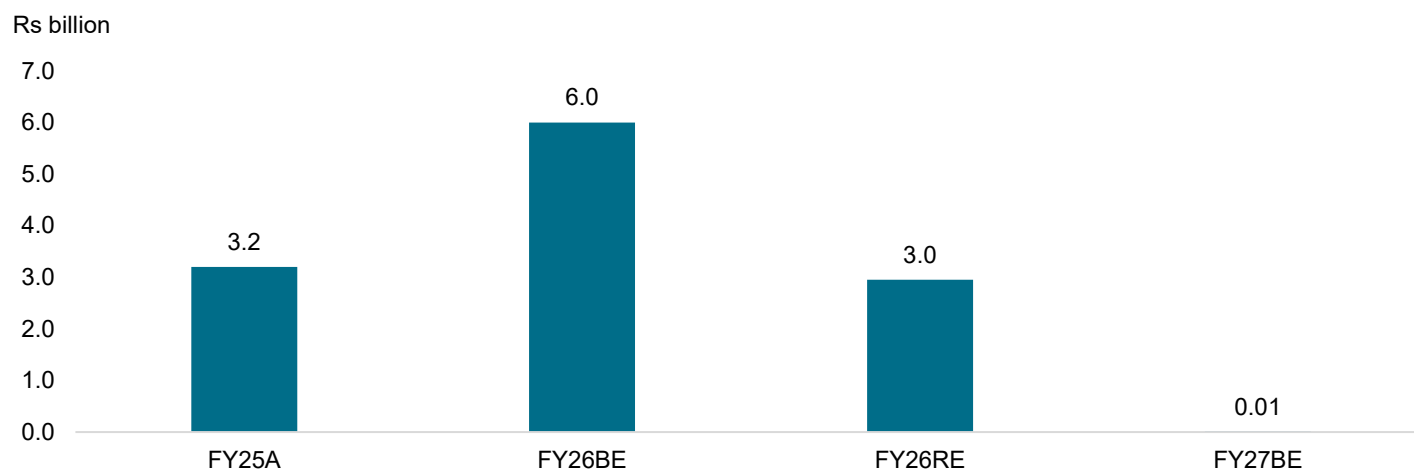
The Viability Gap Funding (VGF) scheme was introduced by the Ministry of Power to further promote cost-effective, long-duration energy storage and renewable energy integration during peak grid hours. The first tranche, approved in March 2024, carried a total outlay of Rs 94.0 billion, including Rs 37.60 billion of budgetary support to enable the installation of 13,220 MWh of BESS capacity, with central assistance capped at up to 30% of capital cost or Rs 2.7 million per MWh, whichever was lower. The second tranche was launched in June 2025 to support an additional 30 GWh of BESS capacity with Rs 54.0 billion of financial support, which is expected to accelerate BESS deployment—particularly for stationary storage—and reinforce the trend of new power tenders being designed with storage components. As per March 2026 the total Battery Energy Storage Systems in India (>1 MWh capacity) are 798 with Bihar having more than 282 storage systems

North Eastern Region Power System Improvement Project (NERPSIP)

In December 2014, the Government of India launched the NERPSIP to strengthen the intra-state transmission and distribution systems in six states: Assam, Manipur, Meghalaya, Mizoram, Tripura, and Nagaland. It was initiated to address the region's power infrastructure challenges, which had hindered economic growth and development. The project aimed to enhance the reliability, efficiency, and sustainability of the power supply in the region, ultimately improving the quality of life for its inhabitants.

A number of Hydro Electric Projects with a total installed capacity of 5,796 MW have been taken up in NER. The major projects include Subansiri Lower (2000MW), Dibang Multi-Purpose project (2880 MW), Teesta Stage VI (500 MW) etc. Under the NER Power System Improvement Project for six States (Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland) for strengthening of the Intra-State Transmission and Distribution Systems (33kV and above) at an estimated cost of INR 67 billion.

Budget estimates and actuals for NERPSIP:



Note: Budgetary allocations added for Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim-power component, Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim-EAP component

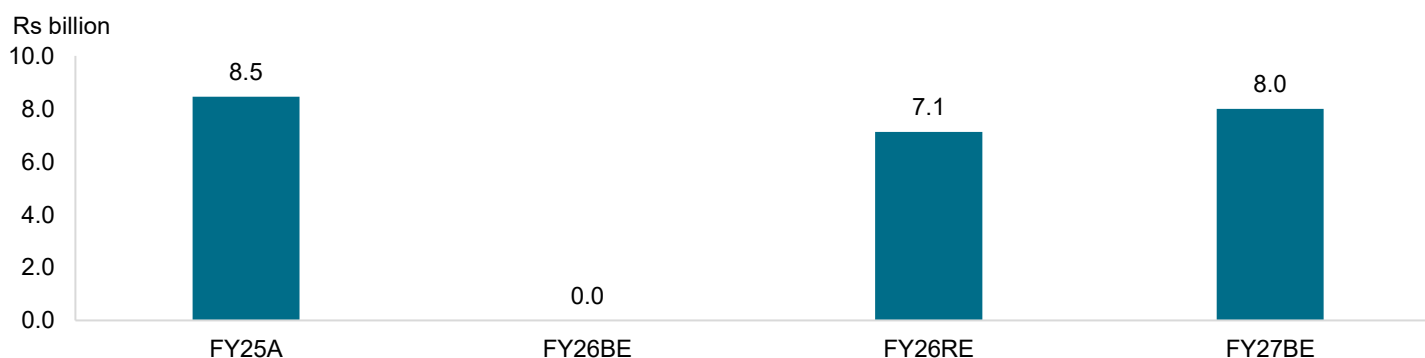
A: Actual, BE: Budget estimates, RE: Revised estimates

Source: Ministry of Power, Crisil Intelligence

Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh and Sikkim

In October 2014, the Government of India approved a comprehensive scheme to strengthen the transmission and distribution systems in Arunachal Pradesh and Sikkim. The initial estimated cost of the project was Rs 47.54 billion, with a completion timeline of December 2018. However, the project's cost has been revised to Rs 91.29 billion as of March 2026, with a revised completion timeline for the awarded scope of work (204 elements) and additional timeline for the unawarded packages (88 elements).

Budget estimates and actuals



Note: A: Actual, BE: Budget estimates, RE: Revised estimates

Source: Ministry of Power, Crisil Intelligence

Green Energy Corridor:

The Green Energy Corridor (GEC) is a transmission infrastructure project aimed at evacuating and transmitting power from large-scale solar and wind power plants in India. The project was initiated in 2012 by the Power Grid Corporation of India Limited (PGCIL), which conducted a study to identify the need for dedicated transmission infrastructure for renewable energy (RE) sources. The study found that the power evacuation and transmission infrastructure in the vicinity of potential RE sites was inadequate, leading to the planning of dedicated transmission infrastructure for large-scale solar and wind power plants. The objective of the GEC project is to ensure the smooth integration of RE into the national grid by providing accurate forecasting, real-time monitoring, and efficient scheduling of RE.

Key Characteristics

The GEC project comprises of both Inter-State Transmission System (ISTS) and Intra-State Transmission System (InSTS), along with the establishment of Renewable Energy Management Centres (REMCs) and other control supporting infrastructure such as reactive power compensation and energy storage systems. The REMCs are installed at various locations, including the Southern Region, which includes states such as Tamil Nadu, Andhra Pradesh, and Karnataka, the Western Region, which includes states such as Gujarat, Maharashtra, and Madhya Pradesh, and the North Region, which includes states such as Rajasthan and Delhi. These REMCs provide accurate forecasting, real-time monitoring, and efficient scheduling of RE to ensure the smooth integration of RE into the national grid. The key features of the GEC project include the evacuation of approximately 24 GW of RE power, the setting up of transmission lines and substations, and the establishment of REMCs.

The government reaffirmed its commitment to facilitating renewable energy integration by allocating Rs 6.0 billion in the budgetary estimates for the GEC in the next fiscal. The funding has been earmarked for the development of cumulative 6,000 km of intra-state transmission infrastructure. The proposed expansion is expected to strengthen grid capacity and improve evacuation of renewable power.

Phase 1: Intra-State Transmission System Green Energy Corridor Phase-I and Inter-State Transmission System

The first phase of the GEC project includes the Intra-State Transmission System Green Energy Corridor Phase-I, which was approved by the Cabinet Committee on Economic Affairs (CCEA) in 2015. The project has a total target of 9700 ckm of intra-state transmission lines and 22600 MVA sub-stations and is being implemented by State Transmission Utilities (STUs) in 8 RE-rich states, including Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, and Tamil Nadu. The project cost is approximately Rs 101.42 billion, with funding from the Ministry of New and Renewable Energy (MNRE), KfW, and the STUs.

GEC Phase-I has been completed in State of Madhya Pradesh, Rajasthan, Tamil Nadu and Karnataka. Completion date for GEC Phase-I for States of Andhra Pradesh, Himachal Pradesh, Maharashtra is December 2024 and for State of Gujarat is March 2025. The projects have been delayed mainly due to delay in land acquisition, Right of Way (RoW) issues and forest clearances.

The Inter-State Transmission System (ISTS) GEC project, which was commissioned in March 2020, has a total of 3200 ckm of inter-state transmission lines and 17000 MVA substations, and was implemented by PGCIL at a cost of Rs 113.69 billion. Some of the key points of this phase include:

Phase 2: Intra-State Transmission System Green Energy Corridor Phase-II and Inter-State Green Energy Corridor Phase-II

The InSTS GEC-II scheme with total target of 10,750 ckm intra-state transmission lines and 27,500 MVA sub-stations was approved by the CCEA in January 2022.

The project cost is Rs 120.31 billion with central financial assistance from MNRE of Rs 39.70 billion (i.e. 33% of project cost). The balance 67% of the project cost is available as loan from KfW/REC/PFC. The transmission schemes would be implemented by the State Transmission Utilities (STUs) of seven states, i.e. Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu and Uttar Pradesh for evacuation of approx. 20 GW of RE power in the seven States. Currently, the STUs are inviting tenders for implementing the projects. The scheduled commissioning timeline for the projects under this scheme is March 2026. Subsequently, some states had requested for revision of projects under the GEC-II Scheme and the same has been approved by MNRE.

	Transmission Lines (ckm)					Substations (MVA)				
State	FY21	FY22	FY23	FY24	FY25	FY21	FY22	FY23	FY24	FY25
Andhra Pradesh	524	716	798	854	854	635	950	950	1265	1617
Gujarat	1231	1376	1482	1615	1636	2880	6120	7980	7980	7980
Himachal Pradesh	392	468	479	494	499	353	353	663	783	893
Karnataka	531	596	618	618	618	2490	2490	2702	2702	2702
Madhya Pradesh	2679	2762	2773	2773	2773	3570	4588	4748	4748	4748
Maharashtra	569	623	655	704	704	-	-	-	-	-
Rajasthan	984	984	984	984	984	860	1915	1915	1915	1915
Tamil Nadu	1055	1058	1068	1068	1068	1850	1910	1910	1910	1910
Total	7965	8583	8857	9110	9136	12638	18326	20868	21303	21765

Source: PIB (Answered in Lok Sabha on 11th Feb 2026), Crisil Intelligence

Key growth drivers and challenges in the power sector

Key growth drivers:

Growth drivers	Description
Government push towards reducing coal imports	At present, India depends on coal imports along with its domestic production to meet the power demand in the country. In order to reduce the dependence on imports, the government is planning to increase the domestic coal production aiming to increase availability and reduce dependence on imported coal. This would lead to infrastructure growth, in turn boosting the EPC segment
Increase focus on renewable energy	- To achieve its ambitious target of 500 GW of renewable energy capacity by 2030, the Indian government has introduced the Green Energy Corridor (GEC) scheme, which aims to integrate electricity generated from renewable sources like wind and solar into the conventional power grid - Under GEC Phase 1, 24 GW of renewable energy has been integrated into the grid by 2023, with an additional 19.43 GW planned in GEC phase 2 at a cost of Rs 120.3 billion - As of Feb 2026, India's national power transmission network has achieved a significant milestone, crossing over 5 lakh circuit kilometres (ckm) of transmission lines (220 kV and above) along with 1,407 GVA of transformation capacity (220 kV and above).
Development of T&D infrastructure	In December 2023, CEA notified the draft National Electricity Plan (Volume II). The tentative transmission line and capacity addition as per the draft NEP is estimated to increase by ~1.2 times to 580,293 ckm by fiscal 2027 from 485,544 ckm in fiscal 2024. Similarly, transmission line capacity is expected to increase to 685,293 ckm by fiscal 2032 while the substation capacity is expected to rise by ~1.3 times. This will aid the growth of projects in EPC segment of transmission and distribution.
Rising power demand	Power demand is directly linked to GDP. With rising India's GDP coupled with other factors such as urbanisation, rise in population, rise in industrial output the power demand is expected to see a growth of peak demand of 6-8% between fiscal 2026 and 2031. In order to meet the rising demand, the power sector is expected to see a capacity addition from 543 GW in fiscal 2026 to ~900 GW by fiscal 2022. This addition of capacities will further aid the construction under power of EPC industry.
Technological advancements	- The National Electricity Plan (2022-2032) recommends the adoption of cutting-edge technologies in substations, transmission lines, and communication systems, as well as the use of advanced surveying tools and robust cybersecurity measures. - The integration of these modern technologies is expected to enhance the efficiency and reliability of the transmission network, while also attracting new investments in the sector, supporting both new projects and the upgrade of existing infrastructure
Increase in cross border power transfer	- India's central location in South Asia has sparked regional energy cooperation, with the Ministry of Power introducing guidelines for cross-border electricity trade in 2018 to facilitate imports and exports with neighboring countries. - Multiple transmission projects are planned or underway, including lines connecting India to Nepal, Myanmar, and others, while the "One Sun One World One Grid" (OSOWOG) initiative is under discussion to create a global renewable energy grid, potentially interconnecting with countries like Maldives, Singapore, UAE, and Saudi Arabia. - Once completed, these initiatives will further boost India's transmission infrastructure, attracting new investments and driving growth in the sector.

Source: Crisil Intelligence

Key market challenges:

Market challenges	Description
InSTS infrastructure lag in investment	- While there has been good progress in developing Inter-State Transmission Systems (ISTS) in recent years, Intra-State Transmission Systems (InSTS) remain a concern. - The lack of adequate transmission infrastructure within states can lead to congestion, power shortages, and reduced grid reliability, ultimately affecting the overall efficiency of the power system
Right of Way (RoW) Issues	- The acquisition of land and securing RoW for transmission lines has become a significant challenge, resulting in delayed project timelines and increased costs. - According to the CEA monthly progress report for February 2025, over 50% of ISTS projects awarded under the TBCB route have cited right-of-way issues as the primary reason for project delays
Additional time taken in environmental clearances	- The process of obtaining environmental clearance for transmission lines that traverse forest areas is also causing delays in project timelines, ultimately leading to increased costs. - As per the CEA monthly progress report, over 30% of the projects are facing challenges related to forest and wildlife clearance, highlighting the significance of this issue in hindering project progress
Synchronous Commissioning (SCOD) Issues	- The synchronized commissioning of multiple projects is essential to ensure that the transmission infrastructure is ready to evacuate power from generating stations in a timely and efficient manner. - Delays in one project can trigger a ripple effect, impacting connected projects and leading to a cascade of delays and inefficiencies, ultimately hindering the overall progress of the transmission infrastructure development.

Source: Crisil Intelligence

Assessment of competitive landscape of water and wastewater treatment market in India

Overview of key players

In this section, Crisil has analysed some key players operating in the water and wastewater treatment industry in India. Data has been sourced from publicly available information, including annual reports and investor presentations of listed players, regulatory filings, rating rationales, and/or company websites. The financials in the competitive section have been re-classified by Crisil Intelligence, based on annual reports and filings by the players. Financial ratios used in this report may not match with the reported financial ratios by the players on account of standardization and re-classification done by Crisil.

Note: The list of competitive landscape peers considered in this section is not exhaustive but an indicative list

Operational overview

Overview of key players in water and wastewater treatment industry in India

Company Name	Established	Geographical presence	Overview
Denta Water and Infra Solutions Limited	2016	India (Majority of the projects are in Karnataka)	Denta Water and Infra Solutions Ltd operates in the EPC sector, focusing on projects related to groundwater recharge, lift irrigation, and drinking water supply infrastructure, including those under the Jal Jeevan Mission. The company's services encompass design, engineering, procurement, and installation, as well as on-site execution and project management, culminating in project commissioning. Additionally, it offers operations and maintenance services for a specified period, typically ranging from three to five years, post-commissioning. The company's portfolio also includes construction projects in the railway and highway sectors, with experience in water management infrastructure, including groundwater recharge projects.
EMS Limited	1998	India: Uttar Pradesh, Uttarakhand, Rajasthan, Bihar, Haryana, Madhya Pradesh, and Maharashtra	EMS Limited a multi-disciplinary EPC company with a presence across multiple business segments. The company's expertise spans Integrated Water and Wastewater Solutions, Electrical Transmission and Distribution, and Building and Road Construction. With a comprehensive range of services, EMS Limited offers turnkey solutions that cater to the needs of various industries, from design and engineering to construction and installation to operation and maintenance. The company's capabilities extend to undertaking EPC and HAM contracts, making it a complete solution provider for the projects
Enviro Infra Engineers Ltd	2009	India: Uttar Pradesh, Rajasthan, Haryana, Madhya Pradesh,	Enviro Infra Engineers provides services related to environmental infrastructure. The company's offerings include Sewage Treatment Plants (STP) and Sewage Systems (SS),

Company Name	Established	Geographical presence	Overview
		Chhattisgarh, Delhi, Gujarat, Karnataka, Punjab, Jharkhand	Common Effluent Treatment Plants (CETP), and Water Supply Scheme Projects (WSSP). Enviro Infra Engineers delivers its projects through various models, including Engineering, Procurement, and Construction (EPC), Hybrid Annuity Model (HAM), and Operation and Maintenance (O&M) contracts.
GA Infra Private Limited	1994	India: Haryana, Rajasthan, Uttar Pradesh, Madhya Pradesh, Delhi	GA Infra Private Limited (GAIPL) was founded by Mr. Gajendra Agarwal and was initially a proprietorship firm. It was later reconstituted as a private limited company in March 2012. The company takes on turnkey projects that involve setting up water distribution systems, water purification plants, and solar pumps. GAIPL primarily operated in Rajasthan, but it has also expanded its presence to other states.
Gaja Engineering Private Limited	2011	India: West Bengal, Orissa, Andhra Pradesh, Uttar Pradesh, Jharkhand, Telangana, Maharashtra, Goa, Karnataka, Jammu	Gaja Engineering Private Limited is a construction company that executes various types of contracts, including civil, mechanical, electrical, water, irrigation, railways, roads, and building projects. The company undertakes turnkey works and is currently involved in projects related to water, electrical, irrigation, tunnels, industrial buildings, environmental engineering, and operational maintenance, among others
Ion Exchange (India) Ltd	1964	Pan India Global: APAC, Africa, Europe, Middle east and North America	Ion Exchange (India) Ltd provides water, wastewater treatment, and environmental solutions. The company is headquartered in Mumbai and has multiple manufacturing and assembly facilities in India and abroad, including Portugal, UAE, Indonesia, Bangladesh, and Saudi Arabia, with a presence in other key geographies as well. The company provides comprehensive and integrated services and solutions in water and wastewater treatment, including sea water desalination, recycle, and zero liquid discharge plants to diverse industries. Additionally, it offers a comprehensive range of resins, specialty chemicals, and customized chemical treatment programs for water, non-water, and specialty applications

Company Name	Established	Geographical presence	Overview
JITF Infralogistics Limited	2006	India: Madhya Pradesh, Delhi, Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, Rajasthan, Tamil Nadu, Assam, Uttarakhand, Maharashtra Global: Africa, MENA and ASEAN	JITF Infralogistics Limited operates its infrastructure businesses through its subsidiaries, Municipal Solid Waste management and Waste to Energy business which is being carried out by JITF Urban Infrastructure Limited, Rail wagon fabrication and manufacturing business being carried out by Jindal Rail Infrastructure Limited, and Water and Wastewater EPC business being carried out by JWIL Infra Limited. These subsidiaries focus on municipal solid waste management, rail wagon fabrication, and water and wastewater EPC businesses, respectively. JWIL provides solutions for projects in the drinking water, irrigation, and wastewater treatment sectors. The company has expanded its footprint beyond India, with a presence in the MENA, Africa, and ASEAN regions. JWIL's portfolio includes desalination, reuse, zero liquid discharge, sludge, and solid waste management.
Technocraft Ventures Limited	1998	India: Uttar Pradesh, Uttarakhand, Rajasthan, and Delhi	Technocraft Ventures Limited (formerly known as M/s Technocraft Construction Private Limited) is a company that develops public infrastructure through turnkey Engineering, Procurement and Construction ("EPC") contracts. The company's work spans multiple infrastructure areas, including Wastewater Treatment ("WWT"), Operation and Maintenance ("O&M") of public utilities, Water Supply Scheme Projects ("WSSPs"), electrical transmission and distribution networks, construction of substations, road and highway works, micro tunneling, renewable energy, housing, residential buildings, and urban development at the sector level. Its clients are primarily state governments and their agencies
VA Tech Wabag Limited	1995	Pan India Global: Bangladesh, Malaysia, Nepal, Philippines, Singapore, Sri Lanka, Vietnam, Bahrain, Oman, Qatar, Saudi Arabia, UAE, Kuwait, Egypt, Ethiopia, Libya, Namibia, Nigeria, Tunisia, Senegal, Zambia, Tanzania, Austria, Russia, Turkey, CIS Countries	VA Tech Wabag Limited provides water treatment solutions, offering a range of services including desalination, wastewater treatment, recycle and reuse, effluent treatment, drinking water, zero liquid discharge, sludge treatment, and energy recovery. The company's expertise spans various aspects of water management, making it a solution provider for industries and communities. VA Tech Wabag Limited pursues partnerships across various project models, including EPC, EP, DBO, BOOT, HAM and O&M. The company is deepening its focus on key regions, including the Middle East, GCC, CIS, and Southeast Asia.

Company Name	Established	Geographical presence	Overview
Vishnu Prakash R Punglia Limited (VPRPL)	1986	India: Uttar Pradesh, Uttarakhand, Assam, Haryana, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Manipur, Daman and Diu	VPRPL is an EPC company with experience in designing and constructing infrastructure projects. The company's business operations are divided into four categories: Water Supply Projects, Railway Projects, Road Projects, and Irrigation Network Projects. It undertakes projects on an EPC basis, with or without operation and maintenance services. The company's Water Supply Projects division offers services, including survey, design, construction, and operation of water supply projects. This includes pipeline laying, water tank construction, and provision of household tap connections. The company also provides design, operation, and maintenance services, and undertakes augmentation and reorganization of water supply projects on a turnkey basis.
Welspun Enterprises Ltd	1994	India: Uttar Pradesh, Maharashtra, Uttarakhand, Bihar, Tamil Nadu, Punjab, etc.	Welspun Enterprise Limited operates in the infrastructure sector, with a focus on the development and operation of roads, highways, water, and wastewater projects across India. The company is involved in various PPP models in rural and urban areas. In addition to its infrastructure business, Welspun Enterprise Limited has investments in oil and gas exploration assets through a joint venture with the Adani Group, called Adani Welspun Exploration Limited (AWEL). The company has also expanded its water infrastructure business through the acquisition of Welspun Michigan Engineers Limited, a trenchless technology-based EPC company, which enables it to provide services in tunnelling, sewer rehabilitation, and allied areas.

Source: Crisil Intelligence, company websites, and company annual reports

Order book trend for the selected players

Orderbook (Rs billion)

Company Name	FY24	FY25	FY26	CAGR (24-26)
Denta Water and Infra Solutions Limited	9.7	6.2	7.3	-13.25%
EMS Limited	18.0+	22.4	18.4	N.Ap.
Enviro Infra Engineers Ltd	23.4	19.9	36.8	25.41%
GA Infra Private Limited	N.A.	N.A.	N.A.	N.Ap.
Gaja Engineering Private Limited	N.A.	N.A.	N.A.	N.Ap.
Ion Exchange (India) Ltd	35.5	27.6	26.3	-13.93%
JITF Infralogistics Limited	40.0*	39.0*	N.A.	N.Ap.
Technocraft Ventures Limited	7.5	7.7	12.36	28.37%
VA Tech Wabag Limited	114.5	124.8	166.2	20.48%
Vishnu Prakash R Punglia Limited	47.2	53.6	N.A.	N.Ap.
Welspun Enterprises Ltd	122.0	143.0	197.39	27.20%

Note: N.A. – Not Available; N.Ap. – Not Applicable, *approximate figures given by the company

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

Financial parameters

Revenue from operations and growth (Rs million)

Company Name	FY24	FY25	FY26	CAGR (FY24-26)
Denta Water and Infra Solutions Limited	2,385.98	2,032.85	2,503.79	2.44%
EMS Limited	7,933.11	9,658.32	7,327.47	-3.89%
Enviro Infra Engineers Ltd	7,289.15	10,660.56	11,456.00	25.37%
GA Infra Private Limited	18,293.20	16,089.20	N.A.	N.Ap.
Gaja Engineering Private Limited	16,415.40	12,325.10	N.A.	N.Ap.
Ion Exchange (India) Ltd	23,478.49	27,371.08	29,148.40	11.42%
JITF Infralogistics Limited	32,835.55	22,648.10	28,080.23	-7.52%
Technocraft Ventures Limited	2,261.02	2,795.64	3,449.96	23.52%
VA Tech Wabag Limited	28,564.00	32,940.00	39,442.00	17.51%
Vishnu Prakash R Punglia Limited	14,738.65	12,374.18	8,511.95	-24.00%
Welspun Enterprises Ltd^	28,742.10	35,841.00	36,153.80	12.15%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY26 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

^ Financials for Welspun Enterprise Ltd. Has been updated based on the latest report which excludes headers of demerged business for FY24

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

YoY Growth in revenue from operations (%)

Company Name	FY25	FY26
Denta Water and Infra Solutions Limited	-14.80%	23.17%
EMS Limited	21.75%	-24.13%
Enviro Infra Engineers Ltd	46.25%	7.46%
GA Infra Private Limited	-12.05%	N.Ap.
Gaja Engineering Private Limited	-24.92%	N.Ap.
Ion Exchange (India) Ltd	16.58%	6.49%
JITF Infralogistics Limited	-31.03%	23.98%
Technocraft Ventures Limited	23.64%	23.40%
VA Tech Wabag Limited	15.32%	19.74%
Vishnu Prakash R Punglia Limited	-16.04%	-31.21%
Welspun Enterprises Ltd^	24.70%	0.87%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY26 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

^ Financials for Welspun Enterprise Ltd. Has been updated based on the latest report which excludes headers of demerged business

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

Operating profit before depreciation, interest and taxes – OPBDIT (Rs million)

Company Name	FY24	FY25	FY26	CAGR (FY24-26)
Denta Water and Infra Solutions Limited	791.38	676.88	742.93	-3.11%
EMS Limited	2,038.47	2,511.67	1,404.22	-17.00%
Enviro Infra Engineers Ltd	1,664.99	2,677.64	2,768.10	28.94%
GA Infra Private Limited	2,347.97	2,158.60	N.A.	N.Ap.
Gaja Engineering Private Limited	2,331.60	1,406.90	N.A.	N.Ap.
Ion Exchange (India) Ltd	2,719.37	2,938.09	2,101.50	-12.09%
JITF Infralogistics Limited	4,783.22	4,045.33	5,584.56	8.05%
Technocraft Ventures Limited	335.47	476.68	698.60	44.31%
VA Tech Wabag Limited	3,757.00	4,223.00	4,774.00	12.73%
Vishnu Prakash R Punglia Limited	2,098.90	1,554.55	-820.84	N.Ap.
Welspun Enterprises Ltd^	4,273.70	5,216.90	7,479.70	32.29%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY26 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

^ Financials for Welspun Enterprise Ltd. Has been updated based on the latest report which excludes headers of demerged business for FY24

OPBDIT = Revenue from operations- total expenses + depreciation and amortization expenses+ finance cost

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

Operating profit before depreciation, interest and taxes – OPBDIT margins (%)

Company Name	FY24	FY25	FY26
Denta Water and Infra Solutions Limited	33.17%	33.30%	29.67%
EMS Limited	25.70%	26.01%	19.16%
Enviro Infra Engineers Ltd	22.84%	25.12%	24.16%
GA Infra Private Limited	12.84%	13.42%	N.A.
Gaja Engineering Private Limited	14.20%	11.41%	N.A.
Ion Exchange (India) Ltd	11.58%	10.73%	7.21%
JITF Infralogistics Limited	14.57%	17.86%	19.89%
Technocraft Ventures Limited	14.84%	17.05%	20.25%
VA Tech Wabag Limited	13.15%	12.82%	12.10%
Vishnu Prakash R Punglia Limited	14.24%	12.56%	-9.64%
Welspun Enterprises Ltd^	14.87%	14.56%	20.69%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY26 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

^ Financials for Welspun Enterprise Ltd. Has been updated based on the latest report which excludes headers of demerged business for FY24 & FY25

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

Profit after tax (Rs million)

Company Name	FY24	FY25	FY26	CAGR (FY24-26)
Denta Water and Infra Solutions Limited	604.69	528.85	609.00	0.36%
EMS Limited	1,526.63	1,837.83	911.94	-22.71%
Enviro Infra Engineers Ltd	1,064.56	1,771.48	1,883.85	33.03%
GA Infra Private Limited	1,416.40	1,044.30	N.A.	N.Ap.
Gaja Engineering Private Limited	1,931.90	1,394.90	N.A.	N.Ap.
Ion Exchange (India) Ltd	1,953.52	2,082.57	1,432.10	-14.38%
JITF Infralogistics Limited	908.23	-244.30	-99.35	N.Ap.
Technocraft Ventures Limited	190.54	282.04	433.15	50.77%
VA Tech Wabag Limited	2,504.00	2,948.00	3,698.00	21.53%
Vishnu Prakash R Punglia Limited	1,221.85	585.96	1,501.16	10.84%
Welspun Enterprises Ltd^	3,194.00	3,538.30	4,712.30	21.46%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY26 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

^ Financials for Welspun Enterprise Ltd. Has been updated based on the latest report which excludes headers of demerged business for FY24 & FY25

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

Financial Ratios (FY25)

Company Name	PAT %	ROE	ROCE	Gearing ratio	Current Ratio	Interest coverage ratio
Denta Water and Infra Solutions Limited	26.02%	18.46%	17.57%	0.00	20.28	201.76
EMS Limited	19.03%	20.66%	24.19%	0.09	8.15	31.66
Enviro Infra Engineers Ltd	16.62%	27.58%	22.62%	0.24	3.07	7.72
GA Infra Private Limited	6.49%	24.61%	20.06%	1.40	1.36	3.37
Gaja Engineering Private Limited	11.32%	10.95%	15.41%	0.00	2.83	15.50
Ion Exchange (India) Ltd	7.61%	18.68%	19.45%	0.25	1.49	25.52
JITF Infralogistics Limited	-1.08%	4.46%	12.23%	-7.36	1.45	1.28
Technocraft Ventures Limited	10.09%	26.64%	22.80%	0.73	1.76	5.37
VA Tech Wabag Limited	8.95%	14.86%	18.39%	0.17	1.70	5.95
Vishnu Prakash R Punglia Limited	4.74%	7.81%	9.98%	0.91	1.51	2.42
Welspun Enterprises Ltd^	9.87%	13.61%	16.14%	0.55	1.76	4.61

Note: *On a consolidated basis; N.A. – Not Available; N.Ap. – Not Applicable, FY26 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

^ Financials for Welspun Enterprise Ltd. Has been updated based on the latest report which excludes headers of demerged business for FY24 & FY25

OPBDIT % = OPBDIT / Revenue from operations

PAT % = PAT / Revenue from operations

Return on Capital Employed (RoCE) = Profit before interest and tax (PBIT) / Average of capital employed

Capital employed: Total debt+ Total Deferred Tax Liability+ Total tangible equity

Return on Equity (RoE) = PAT / Average tangible net worth

Current ratio: Current assets/ Current liabilities

Gearing ratio= Total debt/ Tangible equity

Interest coverage ratio= PBDIT/ Finance cost

PBDIT= Profit before tax+ Finance cost+ Depreciation and amortisation expense

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

Financial Ratios (FY26)

Company Name	PAT %	ROE	ROCE	Gearing ratio	Current Ratio	Interest coverage ratio
Denta Water and Infra Solutions Limited	24.32%	14.04%	17.61%	0.03	15.93	94.87
EMS Limited	12.45%	8.96%	11.75%	0.15	5.14	11.53
Enviro Infra Engineers Ltd	16.44%	16.89%	17.74%	0.34	2.56	8.86
GA Infra Private Limited	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Gaja Engineering Private Limited	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Ion Exchange (India) Ltd	4.91%	11.23%	12.85%	0.34	1.46	12.36
JITF Infralogistics Limited	-0.35%	2.16%	14.33%	-8.89	1.47	1.51

Technocraft Ventures Limited	12.56%	30.57%	27.60%	0.55	1.74	6.27
VA Tech Wabag Limited	9.38%	15.67%	20.18%	0.09	1.71	7.85
Vishnu Prakash R Punglia Limited	17.64%	21.30%	-7.30%	1.03	1.34	-0.97
Welspun Enterprises Ltd^	13.03%	15.79%	15.13%	0.60	1.87	4.25

Note: *On a consolidated basis; N.A. – Not Available; N.Ap. – Not Applicable, FY26 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

OPBDIT % = OPBDIT / Revenue from operations

PAT % = PAT / Revenue from operations

Return on Capital Employed (RoCE) = Profit before interest and tax (PBIT) / Average of capital employed

Capital employed: Total debt+ Total Deferred Tax Liability+ Total tangible equity

Return on Equity (RoE) = PAT / tangible net worth

Current ratio: Current assets/ Current liabilities

Gearing ratio= Total debt/ Tangible equity

Interest coverage ratio= PBDIT/ Finance cost

PBDIT= Profit before tax+ Finance cost+ Depreciation and amortisation expense

Source: Company annual reports, quarterly financials and investor presentation available in the public domain, Crisil Intelligence

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