

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

March 2026

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Macroeconomic assessment

Global GDP outlook

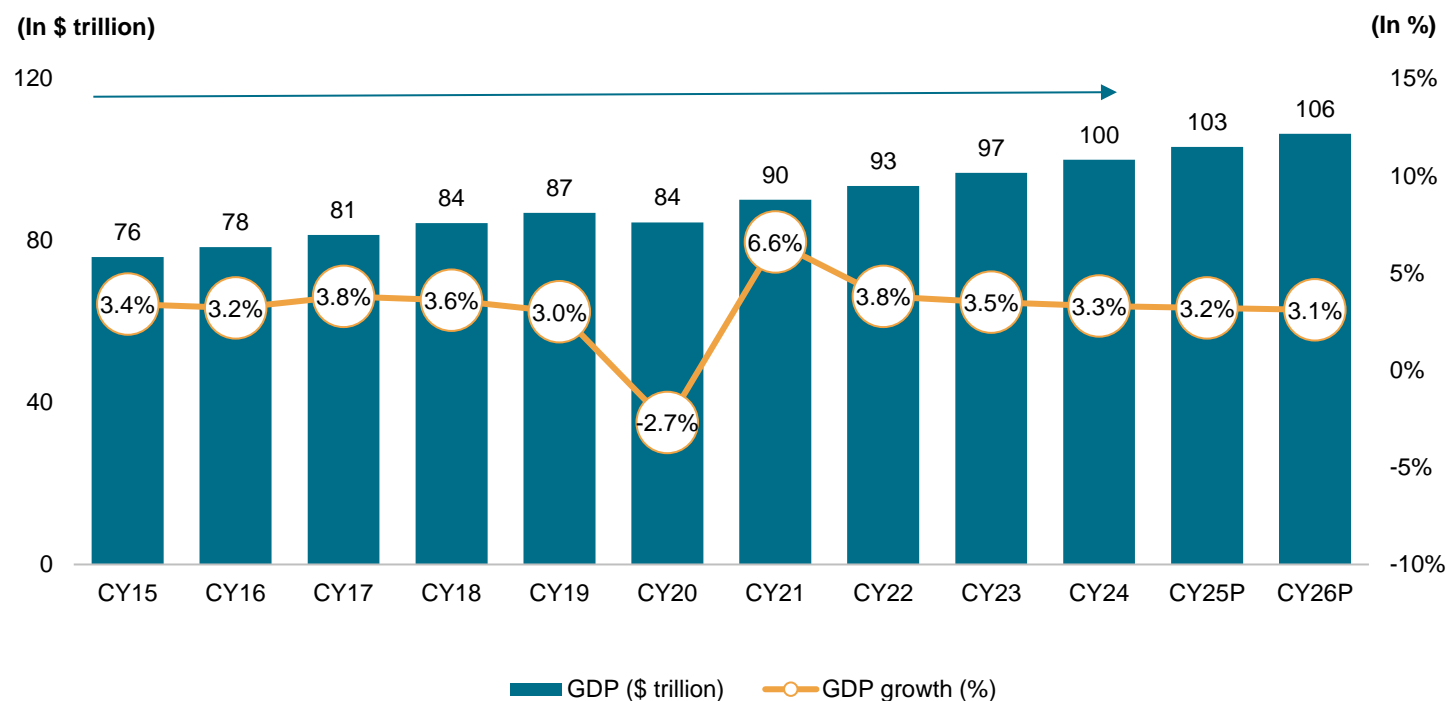
Global GDP estimated to grow 3.1% in CY26

The International Monetary Fund's (IMF) January 2026 update projected global gross domestic product (GDP) to moderate from 3.3% in 2024 to 3.2% in 2025 and to 3.1% in 2026, with the slowdown reflecting headwinds from uncertainty and protectionism, even though the tariff shock is smaller than originally announced.

Following the implementation of increased tariffs by the United States in February, subsequent agreements and adjustments have helped moderate some of the initial impacts; however, the U.S. effective tariff rate remains high (at about 19 percent), and ongoing trade tensions continue to cast a shadow over the global economy, with trade policy uncertainty remaining elevated. However, uncertainty about the stability and trajectory of the global economy remains acute. Several major economies have adopted a more stimulative fiscal stance, raising concerns about the sustainability of public finances and possible cross-border spillovers.

Overall, risks to the outlook remain tilted to the downside. Prolonged policy uncertainty could dampen consumption and investment. Further escalation of protectionist measures, including nontariff barriers, could suppress investment, disrupt supply chains, and stifle productivity growth.

Global GDP trend and outlook (2015-26P, \$ trillion)



Note: E: Estimated, P: Projection, CY: Calendar year

Source: IMF economic database, Crisil Intelligence

India is among the fastest-growing major economies

India is the world's fourth-largest economy in 2025 and is growing faster than major global economies as per IMF forecasts.

Advanced economies

- **US:** In the United States, growth slow to 2.0% in 2025 and projected to remain steady at 2.1% in CY26, on account of lower effective tariff rates, a fiscal boost from the passage of the One Big Beautiful Bill Act (OBBBA) and easing financial conditions. However, greater policy uncertainty, higher trade barriers, and lower growth in both the labour force and employment exerted downward pressure of the growth.
- **Euro area:** Growth in the euro area is modestly to 1.2% in CY25 and projected to 1.1% in CY26 due to elevated uncertainty on multiple fronts and higher tariffs. However, recovering private consumption from higher real wages and fiscal easing in Germany in 2026 is expected to provide a partial offset, whereas strong performance in Ireland lifts growth in 2025. The euro area economy is expected to grow at potential in 2026.

Emerging markets and developing economies

- **China:** In China, the 2025 GDP growth forecast stood at 4.8%. Growth is expected to moderate in CY26 to 4.2%. A stronger-than-expected outturn in the past few quarters, reflecting front-loading in international trade and relatively robust domestic consumption supported by fiscal expansion in CY25, more than offset the headwinds from higher uncertainty and tariffs.
- **India*:** India's growth is expected to be 7.4% in FY2026, reaching INR 202 trillion, and 6.4% in FY2027. Despite a recent increase in the US effective tariff rate on Indian imports, a strong first quarter is anticipated to offset this impact. Furthermore, India and the US have reportedly reached a consensus on the tariff rate, which may lead to upward revisions in growth projections in the coming months

Real GDP growth comparison

Real GDP growth (Annual percent change)	CY19	CY20	CY21	CY22	CY23	CY24	CY25	CY26P
Advanced economies	1.9	-3.9	6.0	3.0	1.7	1.8	1.6	1.6
Canada	1.9	-5.0	6.0	4.2	1.5	1.6	1.2	1.5
China, People's Republic of	6.1	2.3	8.6	3.1	5.4	5.0	4.8	4.2
Emerging market and developing economies	3.8	-1.8	7.0	4.3	4.7	4.3	4.2	4.0
Euro area	1.6	-6.0	6.4	3.6	0.4	0.9	1.2	1.1
India*	3.9	-5.8	9.7	7.6	9.2	6.5	7.3	6.4
United Kingdom	1.6	-10.3	8.6	4.8	0.4	1.1	1.3	1.3
United States	2.6	-2.1	6.2	2.5	2.9	2.8	2.0	2.1
World	3.0	-2.7	6.6	3.8	3.5	3.3	3.2	3.1

Notes: P- projected

*Numbers for India are for financial year from April to March (2020 is FY21 and so on)

The first advance estimate (FAE) of the National Statistics Office (NSO) projects India's real gross domestic product (GDP) to grow 7.4% in fiscal 2026 and Crisil projects FY27 GDP growth at 6.7%

As per the IMF, advanced economies comprise countries such as Andorra, Australia, Austria, Belgium, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Macao SAR, Malta, the Netherlands, New Zealand, Norway, Portugal, Puerto Rico, San Marino, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, the UK and the US.

As per the IMF, emerging market and developing economies comprise countries such as Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Aruba, Azerbaijan, The Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, Chile, China, Colombia, Comoros, Democratic Republic of the Congo, Republic of Congo, Costa Rica, Côte d'Ivoire, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Fiji, Gabon, The Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kuwait, Kyrgyz Republic, Lao P.D.R., Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Nicaragua, Niger, Nigeria, North Macedonia, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Russia, Rwanda, Samoa, São Tomé and Príncipe, Saudi Arabia, Senegal, Serbia, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Syria, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Türkiye, Turkmenistan, Tuvalu, Uganda, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, West Bank and Gaza, Yemen, Zambia and Zimbabwe

Source: IMF economic database, Crisil Intelligence

Macroeconomic assessment of India

GDP stood at Rs 188 trillion in fiscal 2025

India's GDP grew at 6.1% compounded annual growth rate (CAGR) between FY14 and FY25 to Rs 188 trillion in FY25 from Rs 98 trillion in FY14. This growth was primarily driven by expansion of nonagricultural economy, particularly the financial, state, and professional services sector, which recorded the highest CAGR of 7.4% during this period. In contrast, the agriculture, livestock, forestry, and fishing sector posted a comparatively modest CAGR of 4.0% during the considered period. A key contributor to GDP growth during this period was the rise in private final consumption expenditure (PFCE), which constitutes the largest share of GDP. This was complemented by improvements in exports and increase in government final consumption expenditure (GFCF).

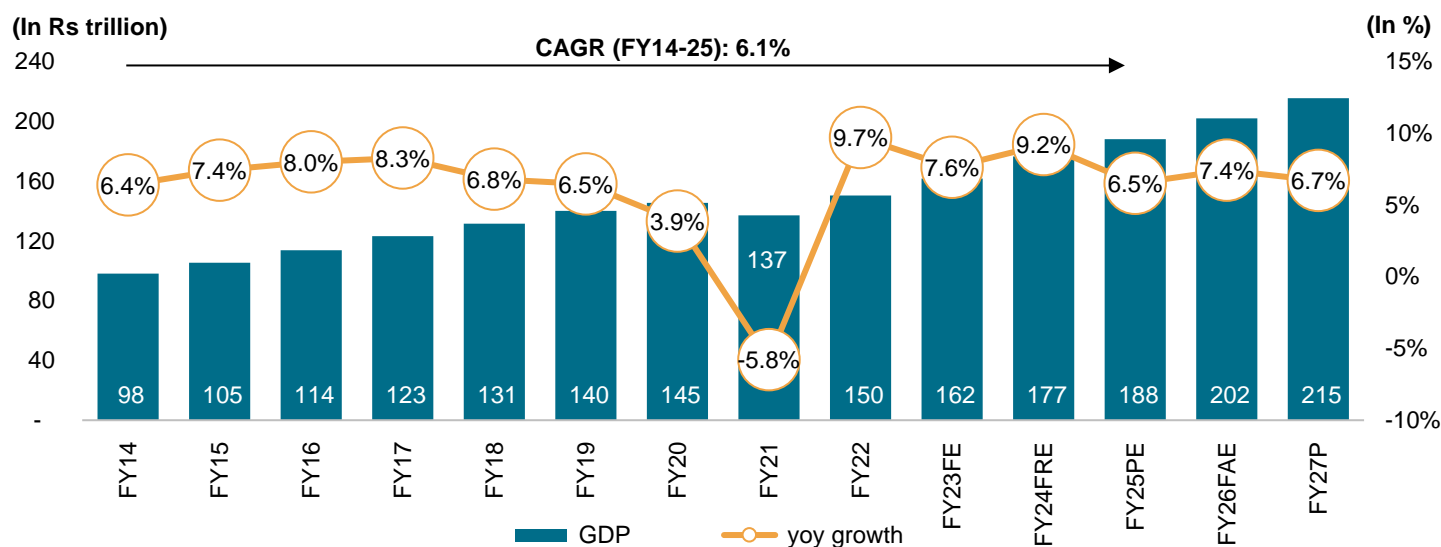
Additionally, first advance estimate (FAE) of the National Statistics Office (NSO) projects India's real GDP to grow 7.4% in FY26, from 6.5% in FY25.

Fixed investments continue to be the key driver of GDP growth this fiscal whereas private consumption has slowed a tad but remained above the trend, buoyed by tax relief, rate cuts by the Reserve Bank of India (RBI), direct benefit transfers and low inflation.

Export growth has held up due to frontloading of merchandise exports in anticipation of tariffs in the first half of the fiscal and robust services exports. On the supply side, gross value added (GVA) growth has strengthened to 7.3%, from 6.4% in fiscal 2025, due to strong growth in manufacturing and services

Crisil project India's real GDP growth at 6.7% in FY27 compared with FAE of 7.4% in the FY26. Three factors are expected to weigh on growth in fiscal 2027 relative to fiscal 2026. First, the trade environment is expected to remain challenging, despite steady global GDP growth. Second, the fiscal support that fuelled growth in the post-pandemic years is expected to moderate in the upcoming fiscal given fiscal consolidation and debt reduction targets. Third, the support from statistical factors, the low base in the first two quarters of fiscal 2025 and a low deflator, that benefitted growth this fiscal will wane. Consumer price index and wholesale price index linked inflation is expected to pick up in fiscal 2027.

India's real GDP growth at constant prices (new series: base year 2011-12)



Note: FE: Final Estimates, FRE: First Revised Estimates, PE: Provisional Estimates, FAE: First Advance Estimates, P: Projected

These values are reported by the government under various stages of estimates

Only actuals and estimates of GDP are provided in the bar graph

India's FY27 projection is Crisil's forecast

IMF projection is 7.3% and MOSPI projection is 7.4%

FAE estimates are based on limited data up to December and are subject to revision as more comprehensive information becomes available, especially if there are significant developments in the fourth quarter; 2) The NSO is set to release a revised GDP series with a new base year of 2022-23 in February, superseding the current 2011-12 series. This may impact the level and growth of GDP due to a more updated base and methodological improvements

Source: Ministry of Statistics and Program Implementation (MoSPI), Crisil Intelligence Per capita net national income of India further improved in FY25

Sustained growth in per capita income between FY14 and FY25

India's per capita income, a broad indicator of living standards, rose from Rs 68,572 in FY14 to Rs 121,968 in FY26 as per FAE, logging 4.9% CAGR. Growth was led by better job opportunities, propped up by overall GDP growth. Moreover, population growth remained stable at ~1% CAGR.

Per capita net national income at constant (2011-12) prices

	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23 FE	FY24 FRE	FY25 PE	FY26 FAE	CAGR (FY14-26)
Per-capita NNI (Rs)	68,572	72,805	77,659	83,003	87,586	92,133	94,420	86,034	94,054	100,163	108,786	114,710	121,968	4.9%
Y-o-Y growth (%)	4.6%	6.2%	6.7%	6.9%	5.5%	5.2%	2.5%	-8.9%	9.3%	6.5%	8.6%	5.4%	6.3%	

Note: FE: Final Estimates; FRE: First Revised Estimates; PE: Provisional Estimates; FAE: First Advance Estimates

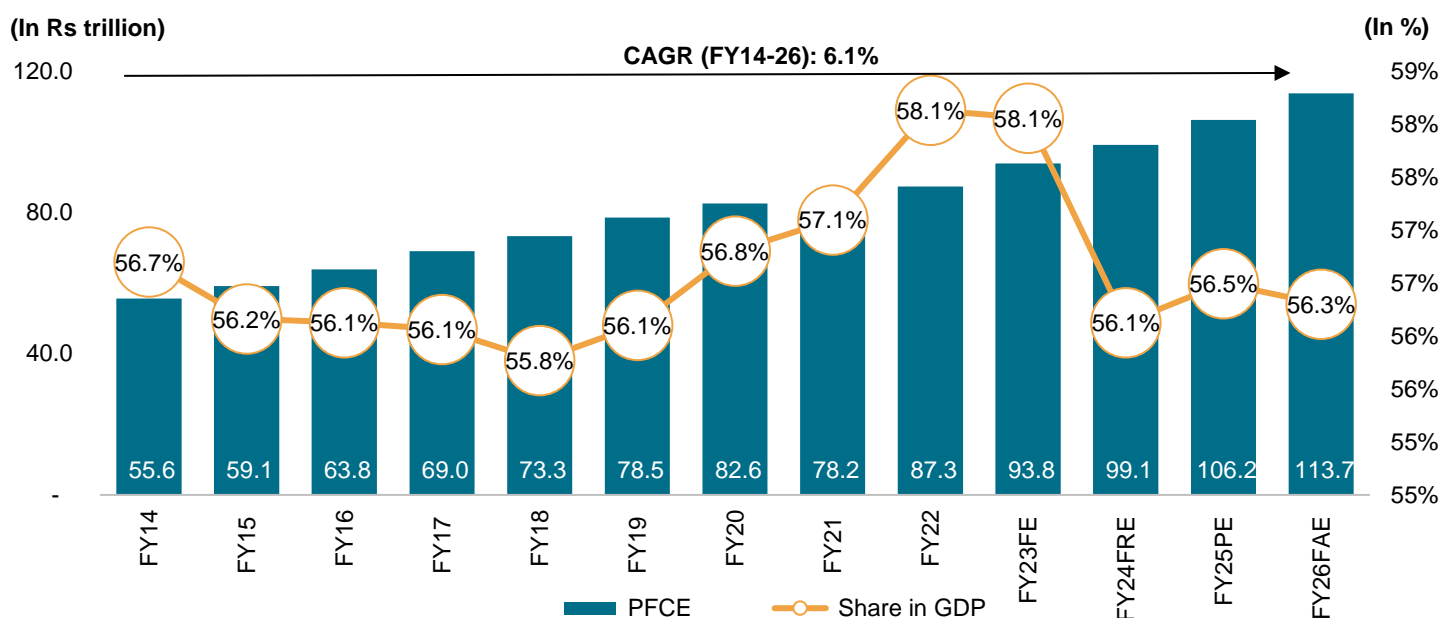
Source: MoSPI, Crisil Intelligence

Private final consumption expenditure to maintain dominant share in India's GDP

PFCE continues to be the largest component of India's GDP with the share of 56.3% basis FY26 first advance estimates. It recorded a CAGR of 6.1% between F14 and FY26, thereby mirroring the overall GDP growth rate during the same period and estimated to be at Rs 113.7 trillion in FY26 compared to Rs 55.6 trillion in FY14.

Notably, this dominant share of consumption in India's GDP broadly aligns with the global trends. For instance, households and non-profit institutions serving households' (NPISHs) final consumption expenditure (as a percentage of GDP) in calendar year 2023 stood at 55.2% for Canada, 51.6% for Euro area, 61.1% for the UK and 67.9% for the US, whereas the global average stood at 56.5%.

PFCE (at constant prices)



Note: FE: Final Estimates, FRE: First Revised Estimates, PE: Provisional Estimates; FAE: First Advance Estimates

Source: Provisional Estimates of annual GDP for 2024-25, MoSPI, Crisil Intelligence

Consumption expenditure will continue to drive GDP growth led by discretionary spends

In the medium to long term, positive economic outlook and growth across key employment generating sectors (such as real estate, infrastructure, and automobiles) are expected to have a cascading effect on overall per capita income. This, in turn, is expected to drive discretionary spending.

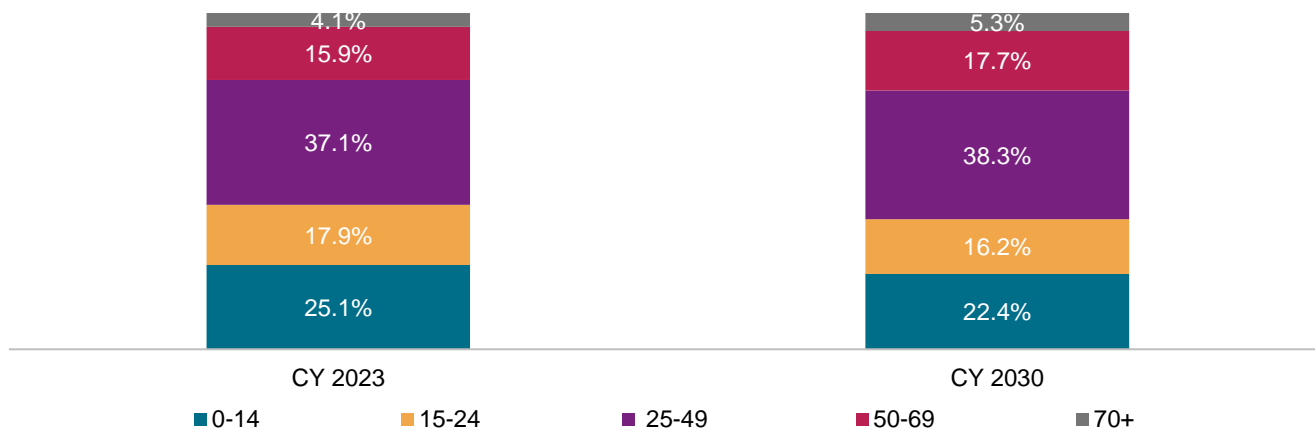
This rising share of discretionary spendings along with growing per capita income will positively impact industries like tourism, hospitality, entertainment, retail, etc which depends heavily on discretionary spends.

India's population aged 25-49 years is projected to increase to ~38% indicates strong potential for disposable income, to contribute to discretionary consumer spending

Furthermore, the share of population aged 25-49 years as a percentage of total population stood at ~37% in CY2023 and is projected to increase to ~38% in CY2030, indicating a strong potential for disposable income.

This increasing share of working age population, coupled with overall economic growth will provide a larger consumer base for industries like entertainment, cruising, lifestyle products, etc. thereby driving greater consumer spending in consumer driven businesses.

Population split across age groups (%)



Note: P: Projected

Population is the above chart as of 1st January

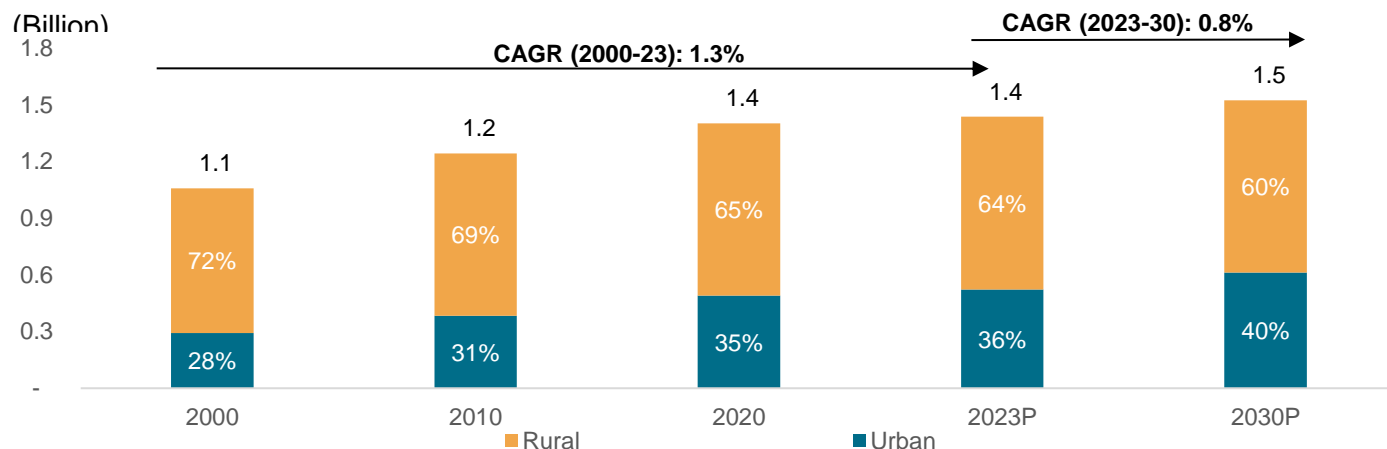
Source: UN Department of Economic and Social Affairs, World Population Prospects 2024, Crisil Intelligence

Urbanisation likely to reach 40% by CY30 as per World Population prospects 2024

India’s population is estimated to have grown to ~1.4 billion in 2023 as per World Population Prospects 2024, compared to 1.0 billion in 2000, thereby registering a CAGR of ~1.3%. Additionally, as per World Population Prospects 2024, the population of India is expected to remain the world’s largest throughout the century and will likely reach its peak in the early 2060s at about 1.7 billion.

Furthermore, India’s urban population has also been increasing over the years. The trend is expected to continue as economic growth increases. From ~31% of the total population in CY10, the country’s urban population is projected to reach nearly 40% by CY2030, according to a UN report on urbanisation. People from rural areas move to cities for better job opportunities, education and quality of life. Typically, migration can be of the entire family or a few individuals (generally an earning member or students).

India's urban population versus rural



Note: P: Projected

Source: World Urbanization Prospects: The 2018 Revision, UN, Crisil Intelligence

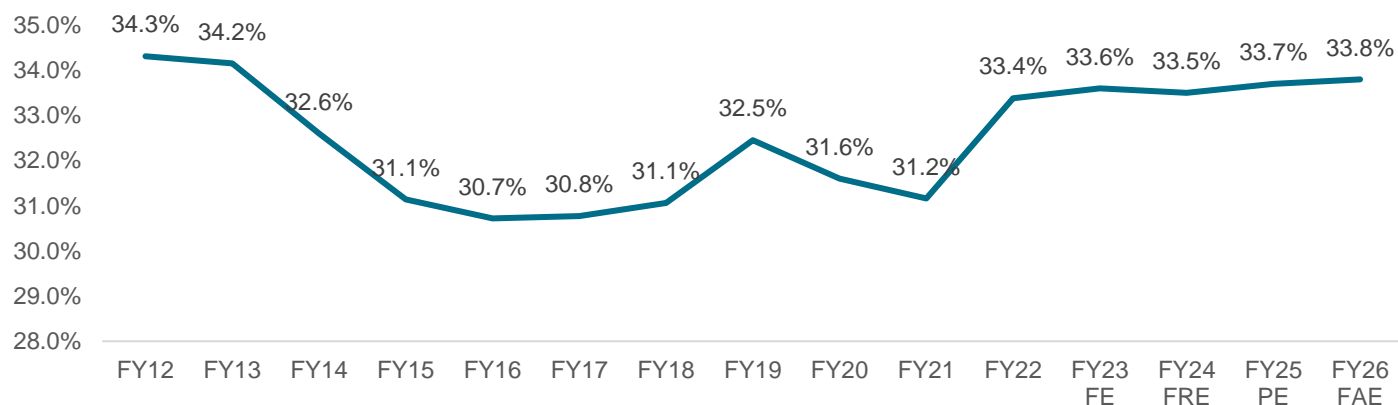
India's gross fixed capital formation as % of GDP to have further improved in fiscal 2025

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 % of GDP (CY2023)

This is a sharp reversal from fiscals 2020 and 2021, when the GFCF had fallen to 31.6% and 31.2% of GDP, respectively, as investments in physical assets were impacted by disruptions in supply chains and business operations owing to the pandemic. It, however, recovered to 33.4% of GDP in fiscal 2022 and 33.6% of GDP in fiscal 2023, attributed to factors such as easing of pandemic-related restrictions, the government's focus on infrastructure development, economic reforms and increase in urbanisation, which boosted demand for affordable housing. As per the first advance estimates for fiscal 2026, GFCF as % of India's GDP to remain at 33.8%.

GFCF as % of India's GDP (fiscal 2012 to 2026)



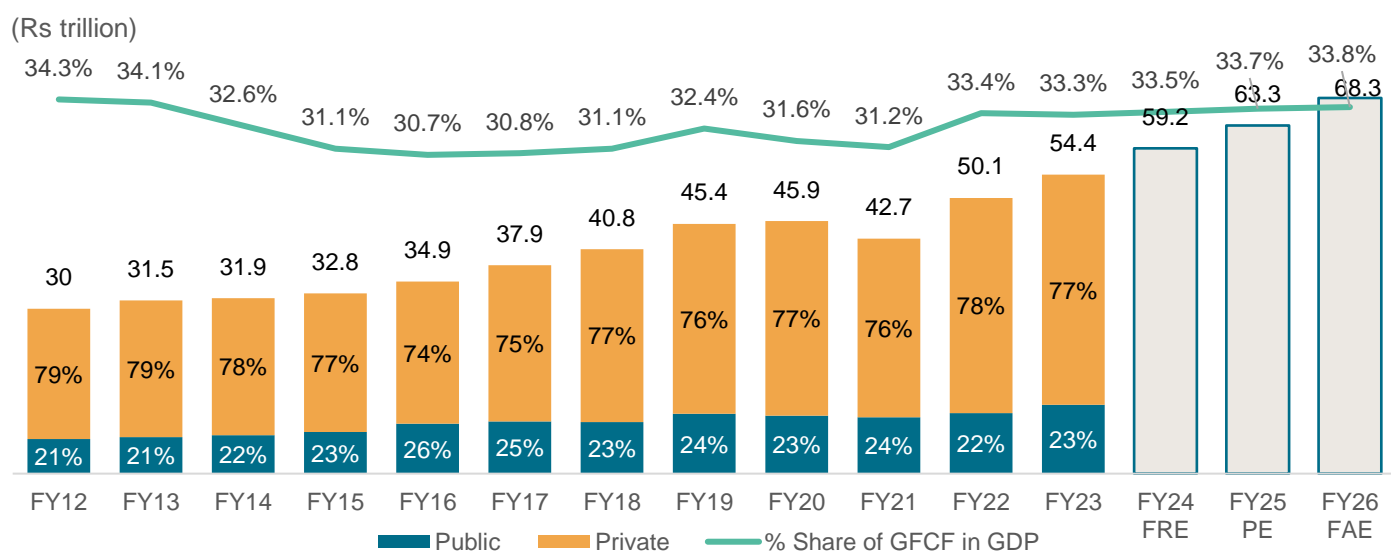
Note: FE: Final Estimates; FRE: First Revised Estimates; FAE: First Advance Estimates; PE: Provisional Estimates;
Source: First Advance Estimates of Annual GDP for 2025-26, MoSPI, Crisil Intelligence

A large part of the rise in fiscal 2023 was because of dwellings, other buildings and structures, which had a significant ~55% weightage in the GFCF. Key factors contributing to the vertical's dominant share were economic growth, the government's commitment to infrastructure development, particularly in roads, railways, and energy projects, and increase in FDI, which boosted private sector investment. A growing middle class and increasing urbanisation contributed significantly to the rising demand for housing and commercial spaces, thereby spurring investment in the construction sector.

Private sector is a major contributor to GFCF

The distribution of GFCF between the private and public sectors has been relatively constant in India, with the private sector consistently the predominant contributor. In fiscal 2023, the private sector accounted for ~77% of total GFCF.

Share of public and private sectors in GFCF



PE – provisional estimate, FRE: First Revised Estimates, FAE: First Advance Estimates,
Note: Private fixed capital formation includes household sector
Source: MoSPI, Crisil Intelligence

Inflation of key construction materials has increased in FY25, but it is in line with overall WPI inflation

Till December 2025, WPI inflation stood at 0.01%. WPI inflation for categories such as paints, mild steel long products registered a negative WPI inflation of -1.80% and -3.17% respectively, whereas manufacture of articles of Porcelain sanitary ware, varnishes, refractory products and cement, lime and plaster concrete cement, and plaster, saw a WPI inflation of 7.31%, 2.30%, 1.61%, and 1.17% respectively.

WPI index of key construction raw materials (%)

Key construction raw materials	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	9MFY 26*
Manufacture of cement, lime and plaster	4.23	-0.90	0.64	2.89	0.44	4.55	1.17	4.55	8.54	0.07	-5.03	1.17
Manufacture of articles of concrete, cement and plaster	3.56	-0.34	-0.69	3.12	2.19	0.08	3.04	3.11	4.02	2.46	1.09	0.35
Manufacture of refractory products	2.95	3.82	-2.84	-2.58	-1.86	-2.16	0.74	5.57	2.94	0.59	1.59	1.61
Manufacture of paints	2.01	-1.88	-1.18	0.09	3.78	1.77	0.17	13.49	11.20	-0.90	-2.92	-1.80
Manufacture of varnishes (all types)	5.00	5.62	1.15	-0.57	5.78	1.69	-2.57	7.54	10.19	-2.82	-1.62	2.30
Porcelain sanitary ware	6.55	-14.87	-8.00	-0.32	4.26	4.90	6.32	9.15	13.41	-8.43	0.40	7.31
Electric insulating material	4.94	1.79	1.02	0.37	-0.09	1.10	-4.79	1.61	3.36	1.99	1.06	0.62
Mild steel- long products	2.02	-13.69	-1.95	12.08	15.27	-4.26	6.16	22.68	8.95	-5.61	-0.64	-3.17
Overall WPI inflation	1.24	-3.69	1.73	2.96	4.26	1.67	1.31	12.97	9.40	-0.72	2.31	0.01

Note: Inflation below zero is highlighted in green,

Source: Office of Economic Advisor, Crisil Intelligence

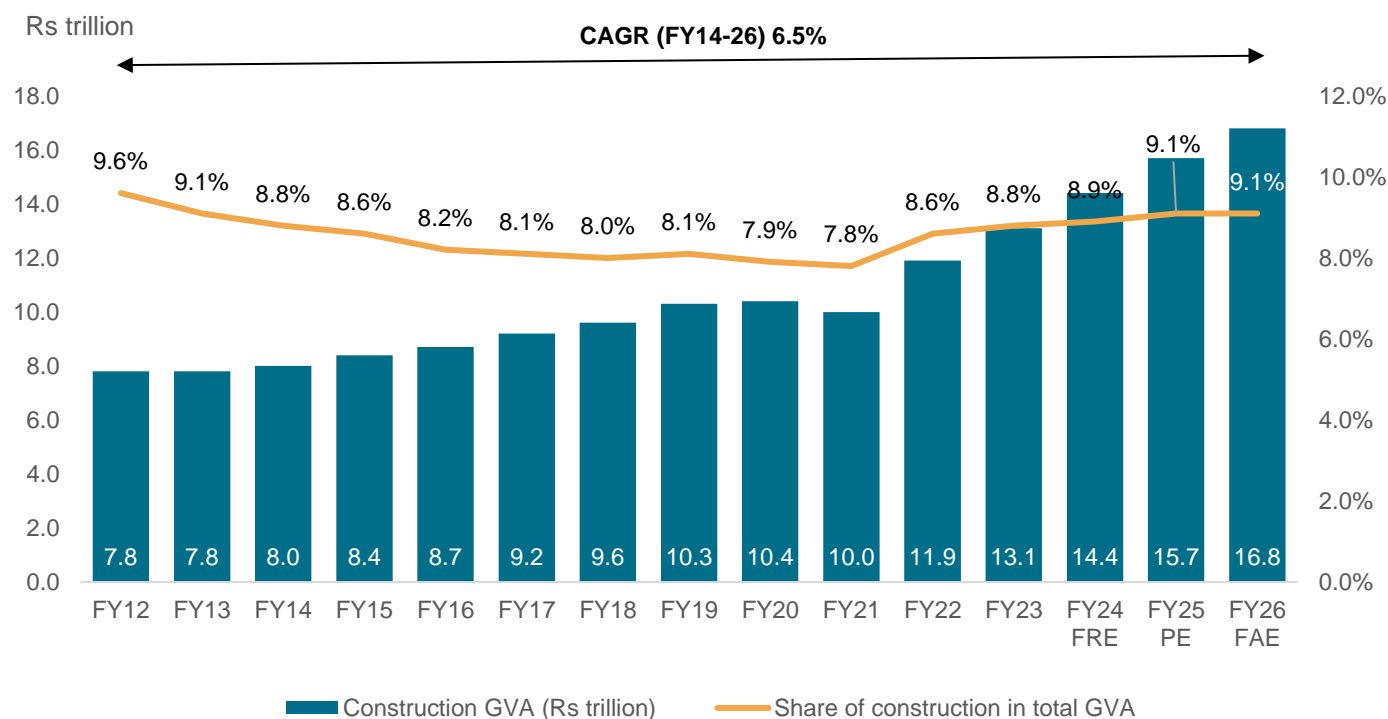
Construction sector's share in overall GVA estimated to have risen further in fiscal 2026

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 16.8 trillion in fiscal 2026FAE from Rs 8.0 trillion in fiscal 2014, which was 6.5% 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. However, in fiscal 2021, the country's GVA was under pressure amid challenges heaped by the pandemic. In fiscal 2022, though, the share of construction GVA in the overall GVA rebounded to 8.6%, increasing further to 8.8% in fiscal 2023.

As per the provisional estimates for fiscal 2025, construction GVA is around Rs 15.7 trillion, thereby contributing to 9.1% of overall GVA.

Construction GVA



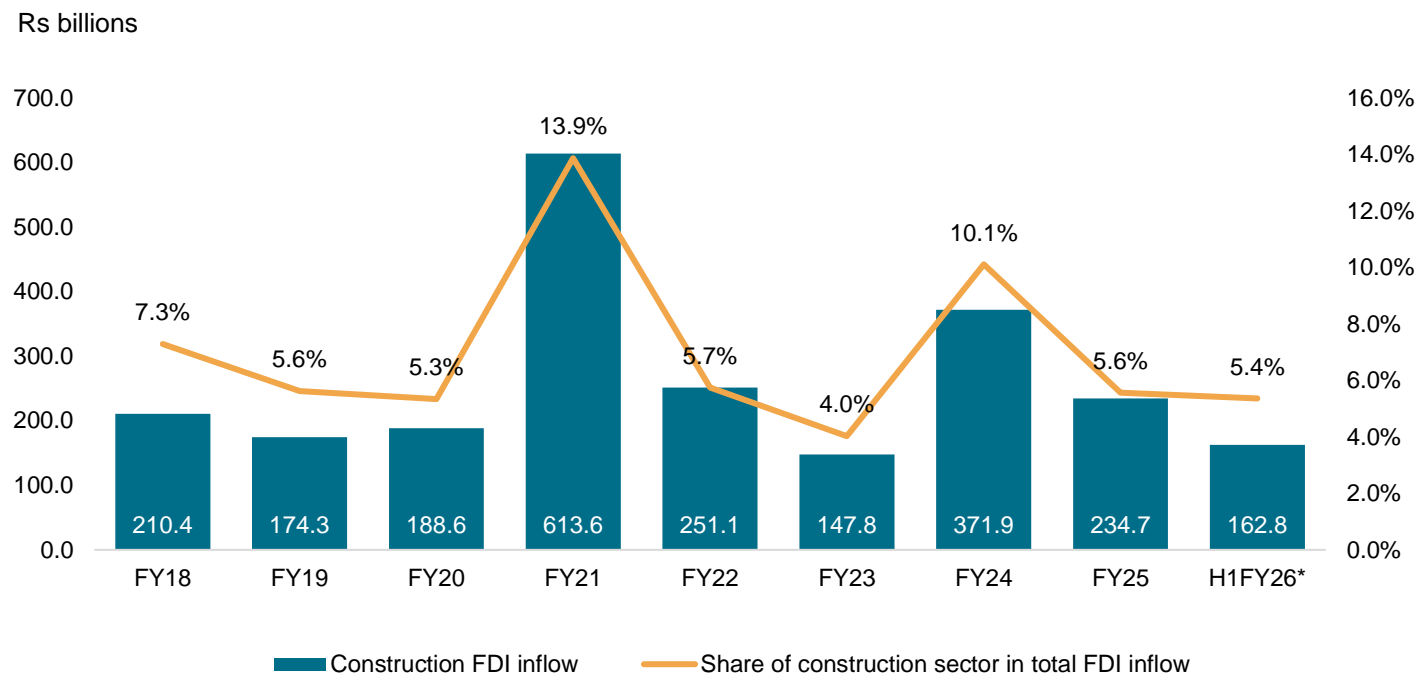
FAE—First advance estimate, FRE – Final revised estimate, PE – provisional estimates
Source: MoSPI, Crisil Intelligence

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 Sep-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. By April 2025, this number has increased to 13,108 projects across 32 different sectors. Out of these, 1,077 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 70% 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 62% 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

					
Roads	Rail*	Power	WSS	Real estate	Others^
27%	13%	19%	12%	11%	18%





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





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

			
Planning	Pre-construction	Under construction	Completed
16%	26%	54%	4%

Note: Values are rounded-off to closest whole number

Source: India Investment Grid (IIG), Crisil Intelligence

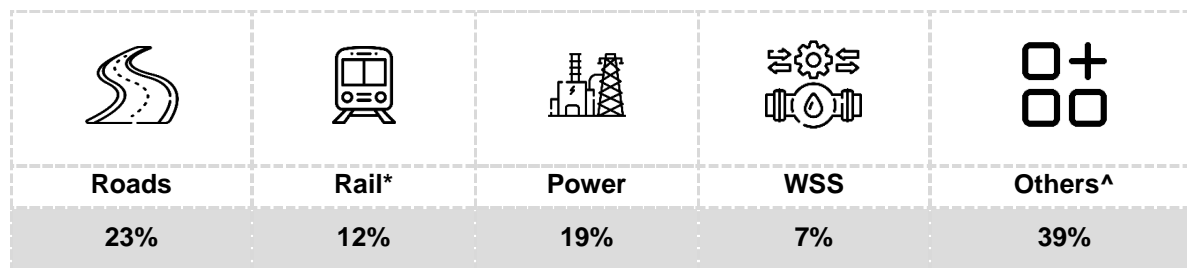
Total EPC opportunity at ~Rs 92 trillion

			
EPC	Private	PPP	Undecided
62%	7%	22%	9%

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



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 sector

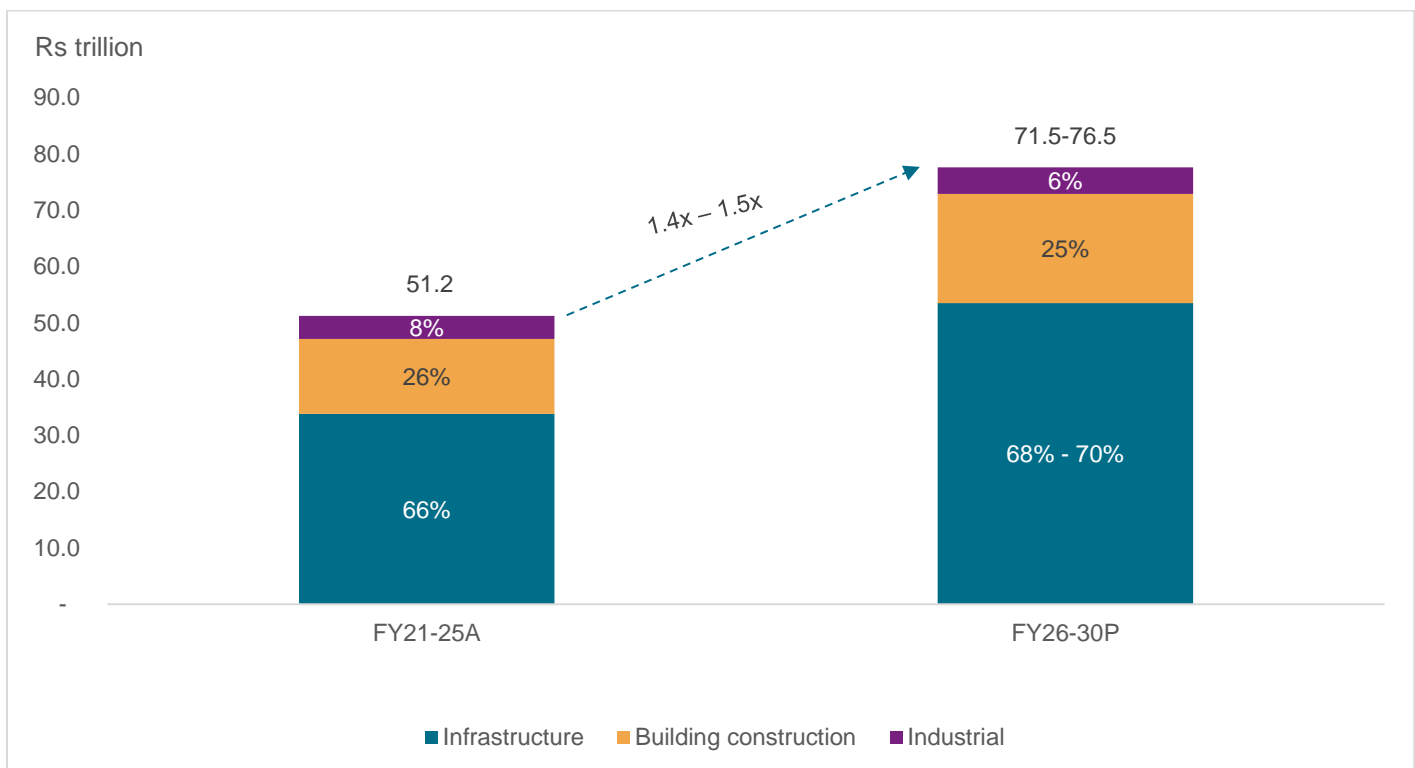
The construction industry in India is expected to grow steadily at an annual rate of 6-8% between fiscal years 2026 and 2030. This growth will be mainly driven by increased spending on infrastructure projects such as roads and railways, supported by both central and state government investments.

In fiscal year 2025, construction capital expenditure has risen by 7% compared to the previous year, reaching Rs 12.7 trillion. This increase aligns with the government's emphasis on infrastructure development, as seen in the rising budget allocations aimed at achieving the goals outlined in the National Infrastructure Pipeline (NIP). Previously, the construction

sector faced challenges like policy delays in infrastructure and low industrial investments. Residential construction also declined due to weak demand, affordability issues, and a sluggish economy. However, recent government initiatives have revitalized construction activity, especially in infrastructure.

The share of infrastructure projects is expected to stabilise in the ~68-70% range in the next five years as against ~66% for FY21-25, 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

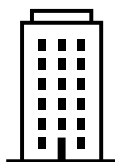
Share of infrastructure segment is estimated to increase further



FY 21-25A: **33-35 trillion**
FY26-30P: **51-54 trillion**
Projected growth: **1.7x-1.8x**

Infrastructure

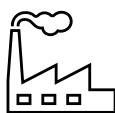
- Infrastructure investments are seen growing faster than the other two sectors due to the government's focus under the National Infrastructure Pipeline (NIP), National Monetization Pipeline (NMP) and the Gati Shakti initiatives. Total construction investments in this sector is expected to attract investments of ~Rs 51-54 trillion between FY26-30P, up from Rs 34-36 trillion between FY21-25.
- Moving forward, the share of infrastructure projects is expected to stabilise in the ~68-70% range in the next five years (FY26-30). 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 21-25A: **13-14 trillion**
FY25-30P: **19-20 trillion**
Projected growth: **1.4x-1.5x**

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 FY26-30P, the sector is expected to rise to Rs 19-20 trillion from an investment of Rs 13-14 trillion between FY 21-25



FY 21-25A: **4-4.5 trillion**
FY26-30P :: **4.8 – 5.5 trillion**
Projected growth: **1.2x-1.3x**

Industrial

- Based on an analysis of eight key sectors, Crisil Intelligence estimates construction investment in the industrial sector at Rs 4.8-5.5 trillion between FY26-30P, compared to Rs 4.5-5 trillion spends seen in FY21-25. The rise in investment is projected due to inclusion of the PLI scheme in the capex investments of the industrial sector.
- Crisil have only considered 3 capex-intensive sectors in case of PLI scheme, viz., auto and auto components, textiles and specialty steel for inclusion in our estimates.

Note: A - Actual, P – Projected

Infrastructure vertical includes warehouse

Building construction includes residential, commercial and non-commercial verticals

Source: Crisil Intelligence

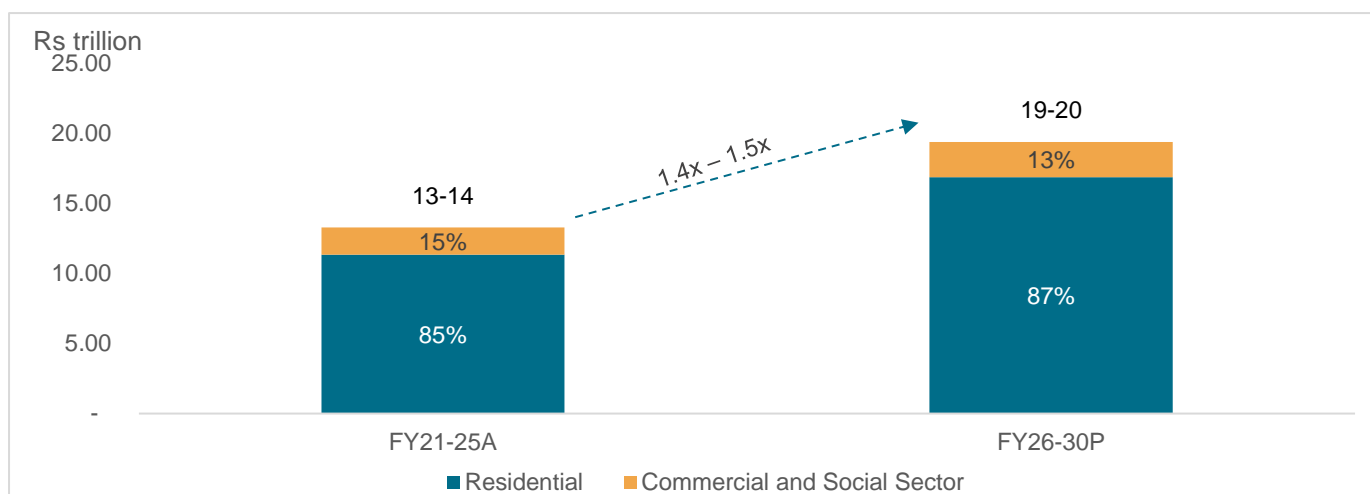
Building and Construction estimated to record 1.4-1.5x growth in FY26-30

The building and construction sector is poised for growth, with an expected increase of 4-6% in fiscal year 2026. Over the longer term, investments in commercial and social sector construction are projected to rise at an average annual rate of 5-7% between fiscal years 2026 and 2030.

A key factor driving this growth is the governments focus on affordable housing. In September 2024, the government launched PMAY-U 2.0 under the Housing for All initiative. By March 2025, approvals were granted for the construction of 3.52 lakh houses under this scheme. These homes fall under two key categories: Beneficiary Led Construction (BLC) and Affordable Housing in Partnership (AHP).

To support this initiative, the government has committed Rs 2.30 trillion in financial assistance, with an overall investment of Rs 10 trillion. This push for affordable housing is expected to boost construction activity and create long-term growth opportunities in the sector.

Share of major segments building construction spending (%)



Note: A: Actual; P: Projected

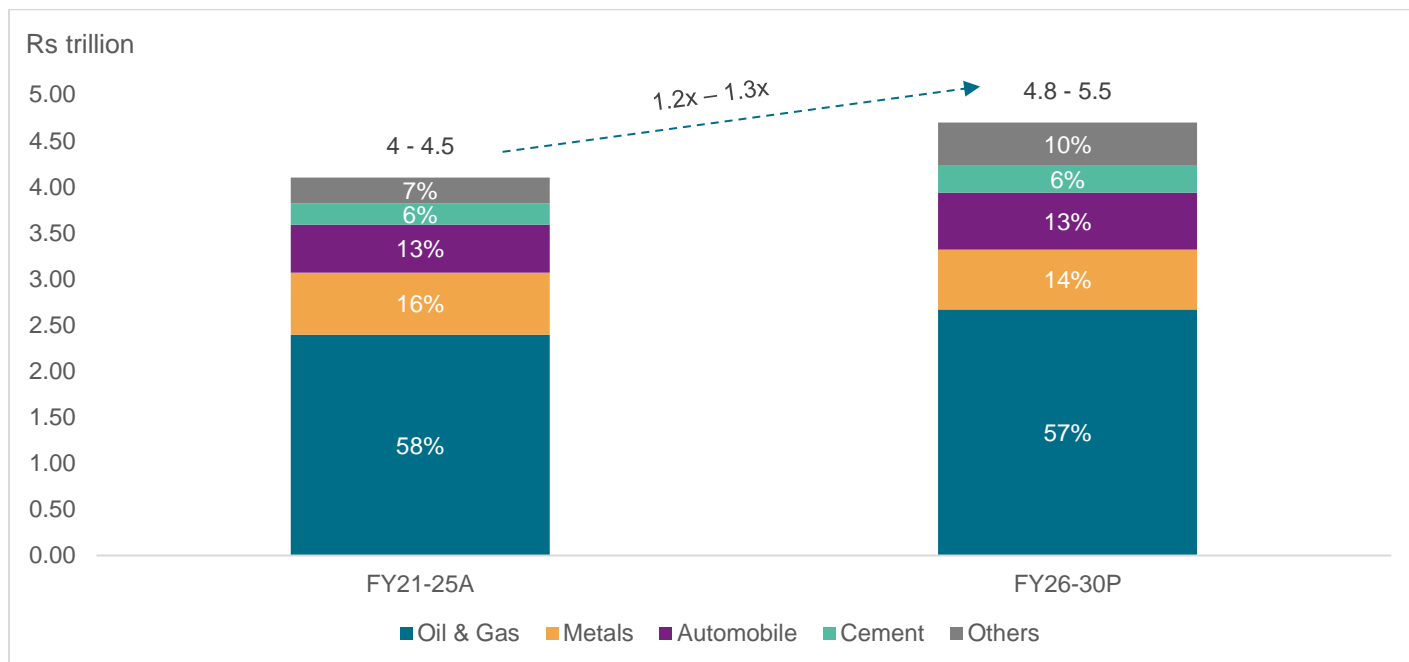
Source: Crisil Intelligence

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

Construction spends across Industrial investments in fiscal 2026 are seen rising 3-4% driven by expansion in oil and gas and metals segment. To be sure, the growth is on a high base of FY25 where the sector grew due to deferred investments from FY21 and FY22 and capex investments from PLI scheme picking up. The PLI scheme is a time bound incentive scheme by the Government of India which rewards companies in the range on 5-15% of their annual revenues based on the companies meeting pre-decided targets for incremental production and/or exports and capex over a base year.

Based on an analysis of eight key sectors, Crisil intelligence estimates construction investment in the industrial segment at Rs -4.6 to 4.8 trillion between fiscals 2026 and 2030, rising ~1.2 to 1.3 times over spends seen in fiscals 2021 to 2025. 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

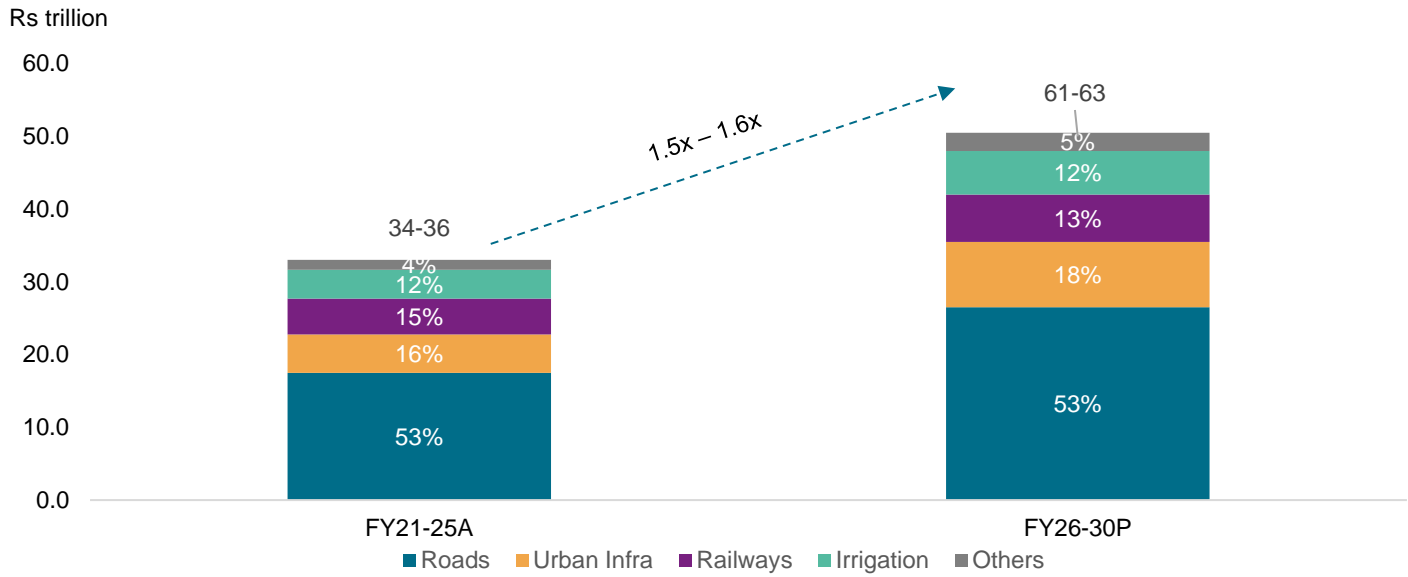
Within infra segments, Road construction investments to grow in fiscal 2026 driven by high value expressways

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. During this time, investments in infrastructure followed a consistent long-term growth pattern, with moderate but stable increases in spending.

However, in fiscal years 2024, 2025 and 2026, the central government significantly increased its spending on infrastructure, leading to a sharp rise in construction capex, with growth reaching double digits. This surge was driven by large-scale investments in roads, railways, and urban development projects, as the government prioritized infrastructure expansion. However, the government is shifting its focus toward building wider, high-capacity highways, so even though fewer kilometers may be constructed, spending on road infrastructure will remain high.

Now, as the government increased its infrastructure spending, the rapid growth in construction capex seen in recent years is expected to be maintained. Private investments in infrastructure are expected to play a crucial role if the growth trajectory is to be sustained over the medium to long term.

Share of major segments in overall Infrastructure construction spending



Note: A: Actual; P: Projected

Source: Crisil Intelligence

SWOT analysis of Infrastructure construction industry

<p>S (Strength)</p>	<p>Growing Economy: India's economic growth supports infrastructure development and construction activities.</p> <p>Government Initiatives: Programs like Sagar mala, Bharat mala, development of metros, Jal Jeevan mission and significant investments in infrastructure projects boost the construction sector</p> <p>Abundant Labor Supply: India has a large pool of skilled laborers, including masons, carpenters, and engineers, who are readily available for construction projects.</p> <p>Low-cost labour: Labor costs in India are relatively low compared to other countries, making it an attractive destination for construction projects.</p> <p>Growing Domestic Market: Growth in major sectors such as automobile, residential, commercial real estate, couple with population growth.</p>
<p>W (Weakness)</p>	<p>Environmental concerns: Construction companies in India has faced criticism for its impact on the environment, particularly in terms of waste generation and energy consumption.</p> <p>High Capital investments: Companies in this sector requires substantial upfront capital. This coupled with high borrowing costs can limit the capacity for construction.</p> <p>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</p> <p>Working capital management: delay in payment from government agencies and security and retention money stretch working capital resulting in high interest costs.</p>
<p>O (Opportunities)</p>	<p>Urbanization: Rapid urbanization offers significant opportunities for residential, commercial, and infrastructure projects.</p> <p>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</p> <p>Rural Development: Government focus on rural infrastructure development creates opportunities in new geographic areas.</p>
<p>T (Threats)</p>	<p>Economic Slowdown: Any downturn in the economy can significantly affect the infrastructure sector.</p> <p>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.</p> <p>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.</p> <p>Competitive Pressure: Industry is highly competitive with many firms vying for same projects. This intense competition can pressure profitability and reduce market share.</p>

Water treatment, wastewater treatment and supply market in India

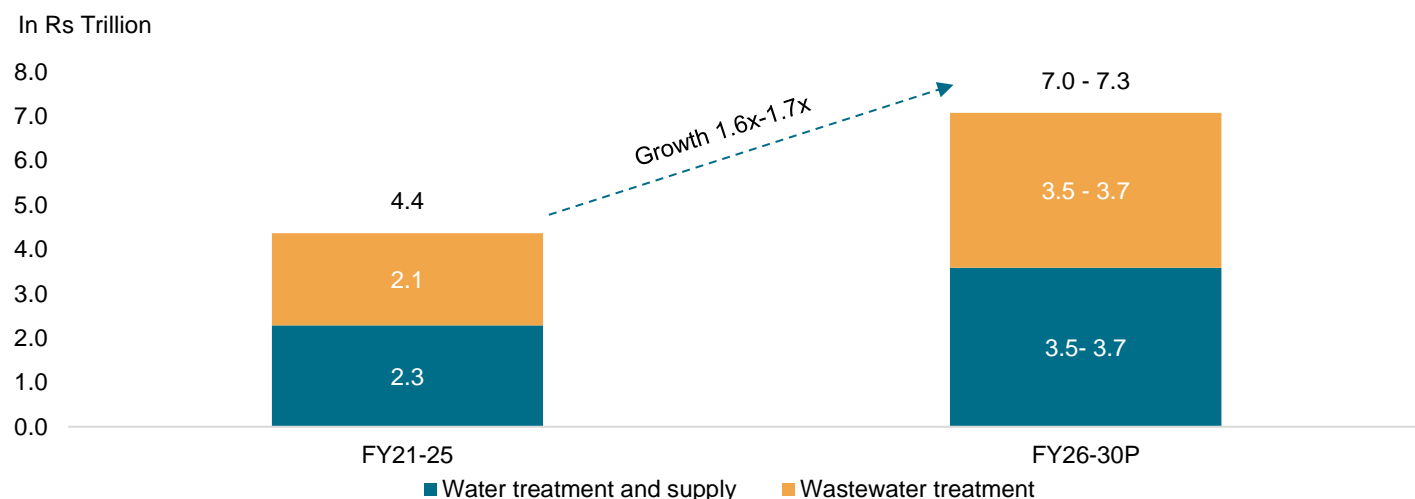
Overview of construction spend on Water treatment, wastewater treatment and supply market

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

Investments in urban infrastructure recorded a 33% CAGR between fiscal 2020-fiscal 2025 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 7.0-7.3 trillion spends on water treatment, supply and wastewater treatment between fiscals 2026 and 2030, which is ~ 1.6x-1.7x 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 Smart City Mission.

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

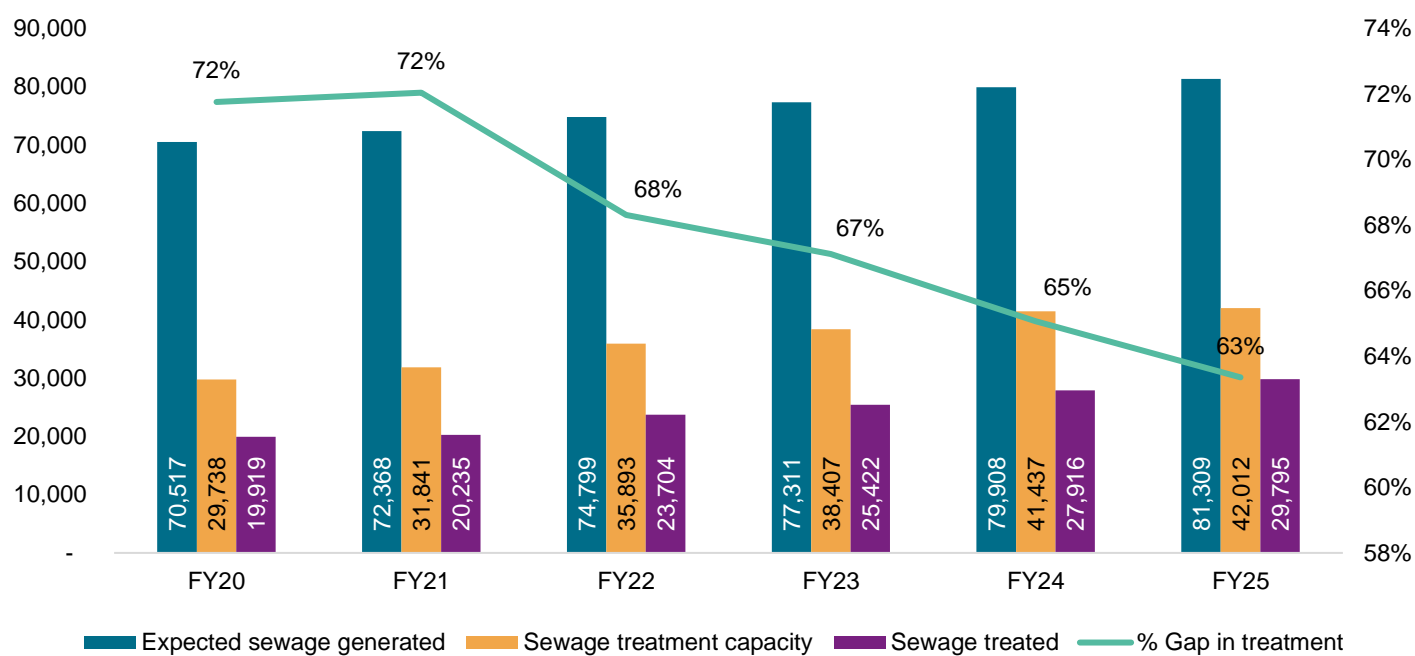
The expected sewage generated has increased steadily over the years, from 70,517 MLD in fiscal 2020 to 81,309 MLD in fiscal 2025, based on population growth and rapid urbanisation. Sewage treatment capacity has also increased from 29,738 MLD to 42,012 MLD during this period, based on monthly reports 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 19,627 MLD to 29,795 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, %)



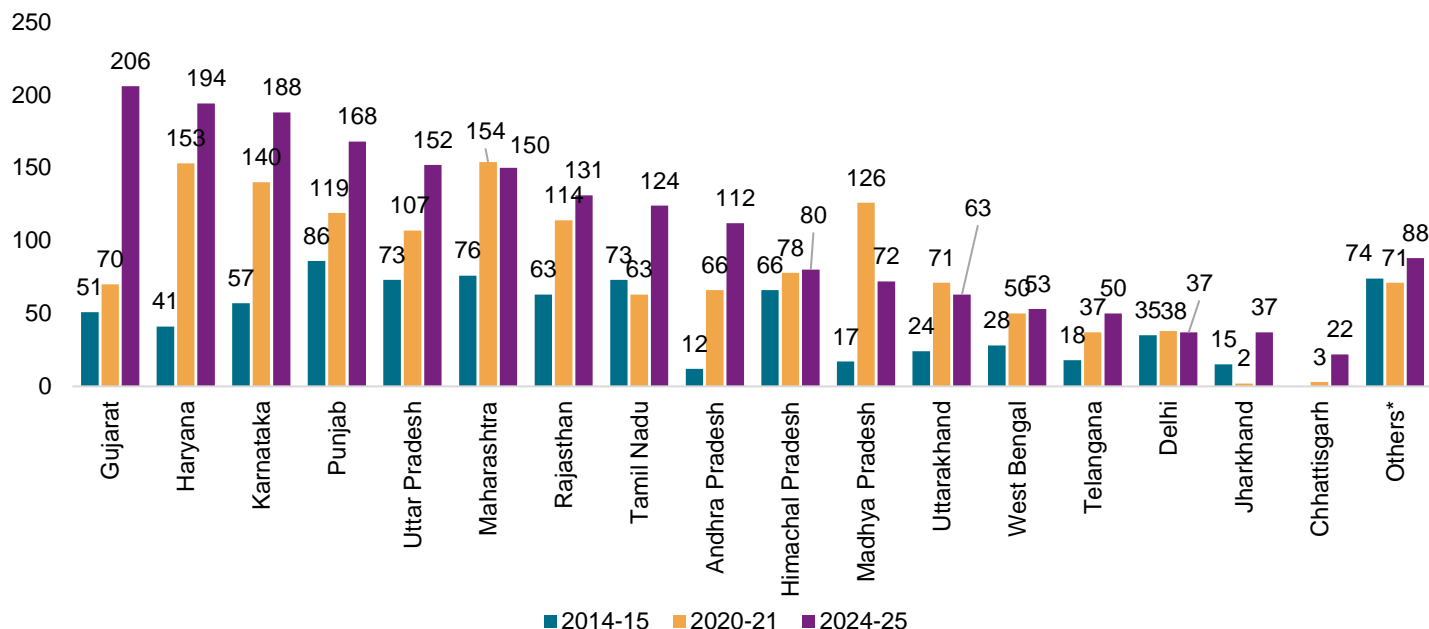
Note: For states where NGT monthly progress reports for March were not available, data from the nearest available month was used. Additionally, data for Chandigarh and Arunachal Pradesh has not been published and therefore was not included in the analysis

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 54% of the total STPs in fiscal 2024. Gujarat leads the pack with 206 STPs, followed closely by Haryana with 195 STPs.

Certain states, including 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 2025, 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.

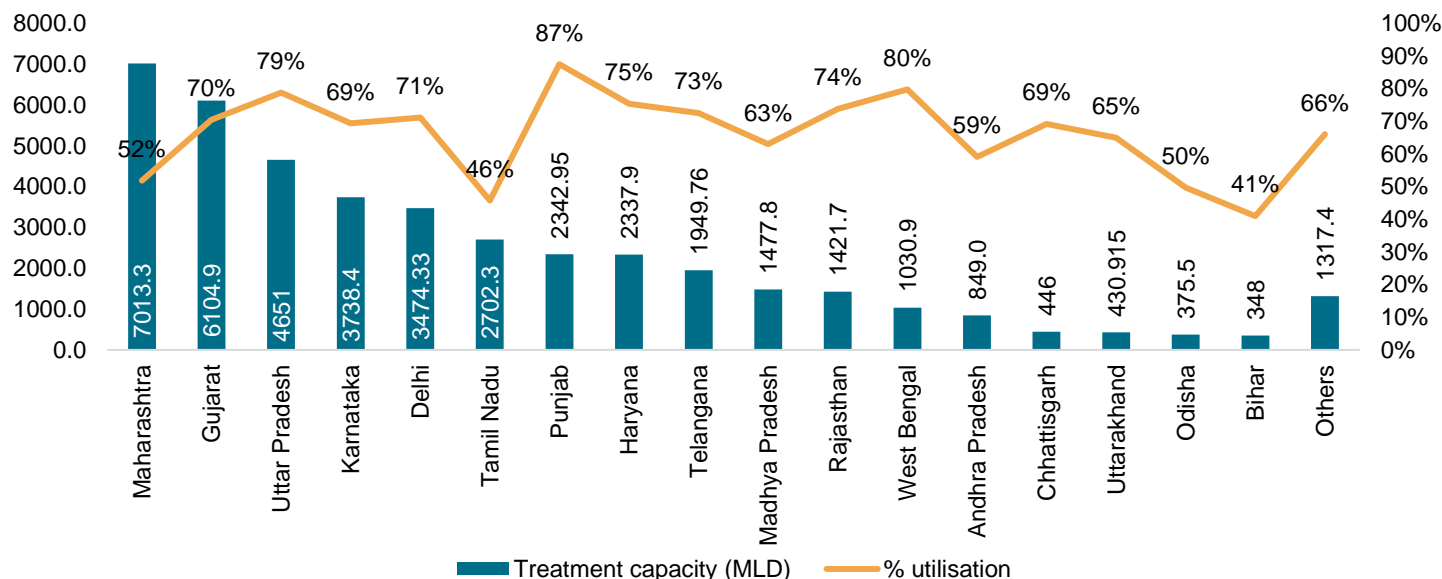
Number of STPs across states



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)



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, 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 18%, followed by

Gujarat with 11%, Uttar Pradesh with 8%, and Delhi and Karnataka with each around 7%. 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 technical 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. Favorable government initiatives, increased infrastructure development in Water and wastewater treatment and supply sectors

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

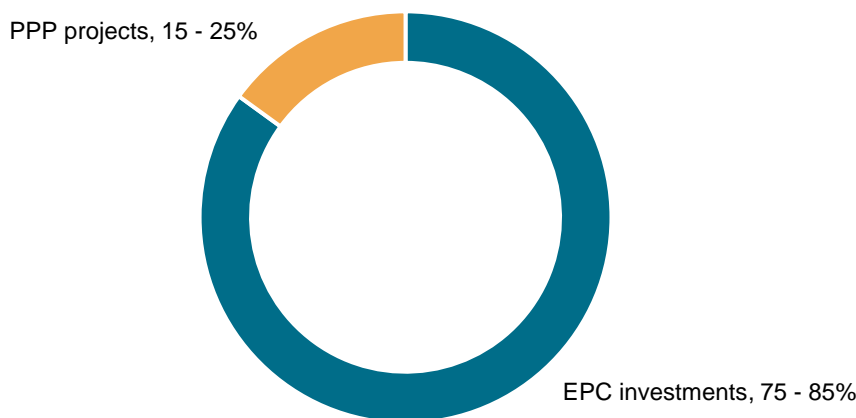
- **Design-build-finance-operate-transfer (DBFOT):** A model where the private sector partner designs, builds, finances, and operates the project for a specified period, after which it is transferred to the government
- **Build-operate-transfer (BOT):** A model where the private sector partner builds 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	Completion date
1	Water Treatment Plant (Panjrapur)	Maharashtra	910 MLD	31,450	Planning	NA
2	Water Treatment Plant (Bhandup)	Maharashtra	2,000 MLD	41,238.8	Planning	29-Feb-2028
3	Water Treatment Plant (Bilga, Ludhiana)	Punjab	580 MLD	15,460.0	Planning	31-Dec-2026
4	Water Treatment Plant (Aluva) and associated transmission network	Kerala	190 MLD	5,230.0	Planning	30-Apr-2028
5	Water Supply Scheme (Indore)	Madhya Pradesh	1,650 MLD	10,730.0	Planning	30-Nov-2027
6	Water Water Treatment Plant (Versona)	Maharashtra	270 MLD	10,362.1	Planning	30-Apr-2028
7	Water Treatment Plant (Bidkin) and associated transmission network	Maharashtra	70 MLD	4,000.0	Planning	30-Jun-2028
8	Water Treatment Plant (Vallah) associated transmission network and over head service reservoirs	Punjab	440 MLD	6,653.2	Under execution	28-Feb-2026
9	Water Treatment Plant (Dighi Port Industrial Area)	Maharashtra	50 MLD	1,771.6	Under execution	31-May-2026
10	Pipe Water Supply Scheme (Mathura)	Uttar Pradesh	NA	33,115.0	Under execution	31-Dec-2026

Note: The above list is not exhaustive and only an indicative list of projects, NA = Not Available
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	Completion date
1	Desalination Plant (Manori)	Maharashtra	200 MLD	130,280	Planning	31-Dec-2028
2	Waste Water Treatment Plant (Ghatkopar)	Maharashtra	337 MLD	36,819.4	Planning	31-Aug-2026
3	Waste Water Treatment Plant (Worli)	Maharashtra	500 MLD	58,170	Under execution	30-Apr-2027
4	Waste Water Treatment Plant (Malad)	Maharashtra	454 MLD	56,880	Under execution	07-Jul-2028
5	Waste Water Treatment Plant (Dharavi)	Maharashtra	418 MLD 209 MLD (TTP)	46,360	Under execution	30-Dec-2027
6	Waste Water Treatment Plant (Bandra)	Maharashtra	360 MLD	42,933.4	Under execution	31-Dec-2027
7	Desalination Plant (Karedu)	Andhra Pradesh	200 MLD	22,000	Under execution	NA
8	Sewage Treatment Plants (Hyderabad, South of Musi)	Telangana	480.50 MLD	11,800	Under execution	31-Mar-2026
9	Desalination Plant (Kona)	Andhra Pradesh	150 MLD	13,100	Planning	NA
10	Desalination Plant (Visakhapatnam)	Andhra Pradesh	100 MLD	12,000	Planning	NA
11	Waste Water Treatment Plant (Versova)	Maharashtra	180 MLD	10,362.1	Under execution	30-Apr-2028
12	Sewage Treatment Plant (Pirana)	Gujarat	240 MLD 160 MLD (TTP)	8445.1	Under execution	31-Dec-2026
13	Sewage Treatment Plant (Vasna)	Gujarat	375 MLD	6,977.7	Under execution	31-Dec-2026
14	Sewage Treatment Plant (Basant Kunj)	Uttar Pradesh	145 MLD	6,710.0	Planning	NA
15	Sewage Treatment Plant (New Link Road Flyover) Project	Uttar Pradesh	140 MLD	6,300.0	Planning	NA

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	Details
Delhi Jal Board (DJB)	<ul style="list-style-type: none"> In December 2024, DJB started partial operations of the Okhla STP under the Yamuna Action Plan Phase III in Delhi. Currently, the trial run is ongoing. The STP will be commissioned in phases The project involves development of 124 million gallon per day at Okhla to treat the sewage generated in South Delhi, New Delhi Municipal Corporation (NDMC) areas and some other parts of Delhi
Greater Chennai Corporation (GCC)	<ul style="list-style-type: none"> On October 30, 2024, GCC passed a resolution to raise municipal bonds worth Rs 2 billion for the construction of stormwater drains. The stormwater drain projects are expected to be implemented in Thiruvottiyur, Manali and Madhavaram localities in Northern Chennai GCC will invest about Rs 4.7 billion under the Asian Development Bank-financed Kosasthalaiyar Basin project. Out of the 769 kilometre (km) drain network proposed, about 100 km is yet to be constructed under the project
Bangalore Water Supply and Sewerage Board (BWSSB)	<ul style="list-style-type: none"> In October 2024, BWSSB proposed to mandate having onsite STPs in upcoming independent houses in Bengaluru. This mandate is already in place for apartment complexes built after 2016 Reportedly, a new policy requiring dual piping systems and small recycling units in upcoming residential buildings has been approved by BWSSB. It will also be submitted to the government for approval and necessary legislative amendments
BWSSB has revived Kengeri Lake	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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
Ghaziabad Municipal Corporation (GMC)	<ul style="list-style-type: none"> GMC has a significant budget for fiscal 2025, with Rs 1.94 billion earmarked for infrastructure development, including sewer and road construction, and Rs 1.39 billion for water conservation, distribution, and strengthening of water infrastructure The corporation also expects to generate revenue through the sale of treated water, with estimated earnings of Rs 670.10 million from the TSTP (Tertiary sewage treatment plant) and Rs 5 million sewage which will supply treated water to private, industrial and other units, promoting sustainable practices and contributing to the corporation's revenue streams

Source: Crisil Intelligence

Digital and technological initiatives

Digital initiatives	Details
Automatic drain cleaning machines by Bhubaneswar Municipal Corporation	<ul style="list-style-type: none"> The Bhubaneswar Municipal Corporation plans to use 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> India's first fully automated vacuum sewer network system was inaugurated in Goa on October 15, 2024, 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 machineries and monitoring systems	<ul style="list-style-type: none"> The Hyderabad Metropolitan Water Supply and Sewerage Board has undertaken desiltation of 300,000 manholes under its 90-day initiative in Hyderabad, with the use of 220 airtech machines and 146 silt removal vehicles for sewage management 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

Growth drivers	Description
Integrated water management	<ul style="list-style-type: none"> • 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
Focus on water security	<ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> ◦ 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> ◦ 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	<ul style="list-style-type: none"> • 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:

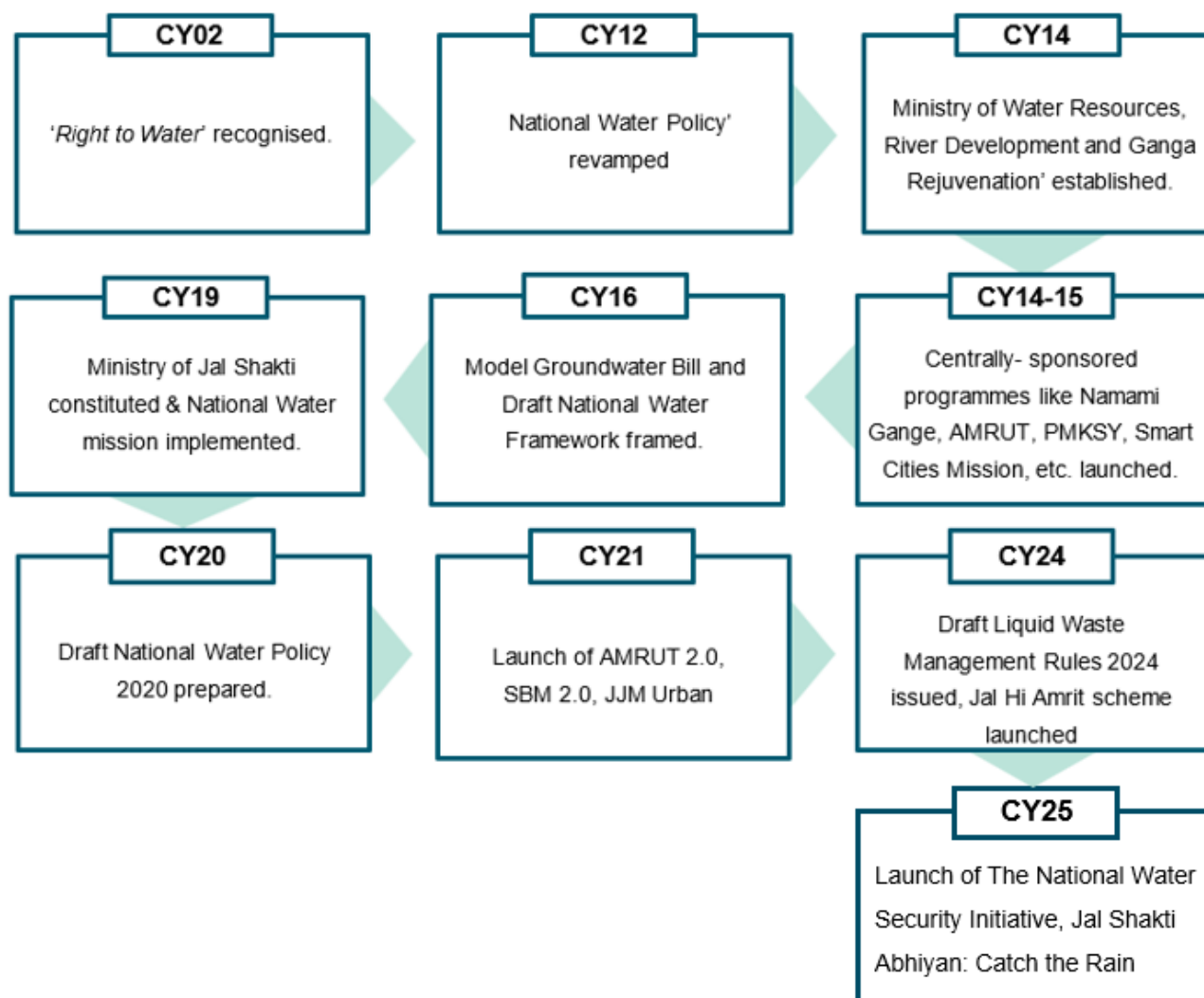
Market challenges	Details
Institutional challenges	<ul style="list-style-type: none"> • ULBs are primarily responsible for the provision and maintenance of wastewater and water treatment facilities in their administrative area. However, in many cases, they lack the capacity to plan and implement such 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Cost of STPs increases substantially with more advanced treatments that ensure reduced pollution <ul style="list-style-type: none"> ○ 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 <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> • 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

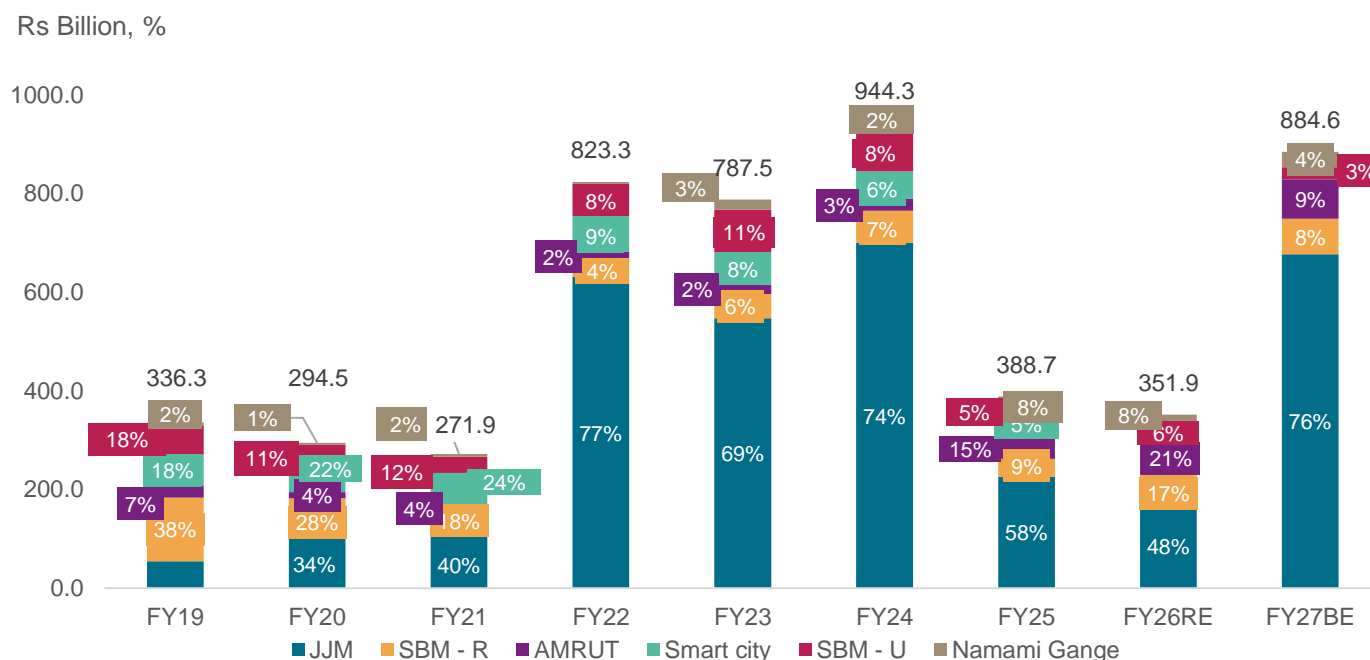
The government has various policies and frameworks that supported the growth of the water management sector in the country.



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

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

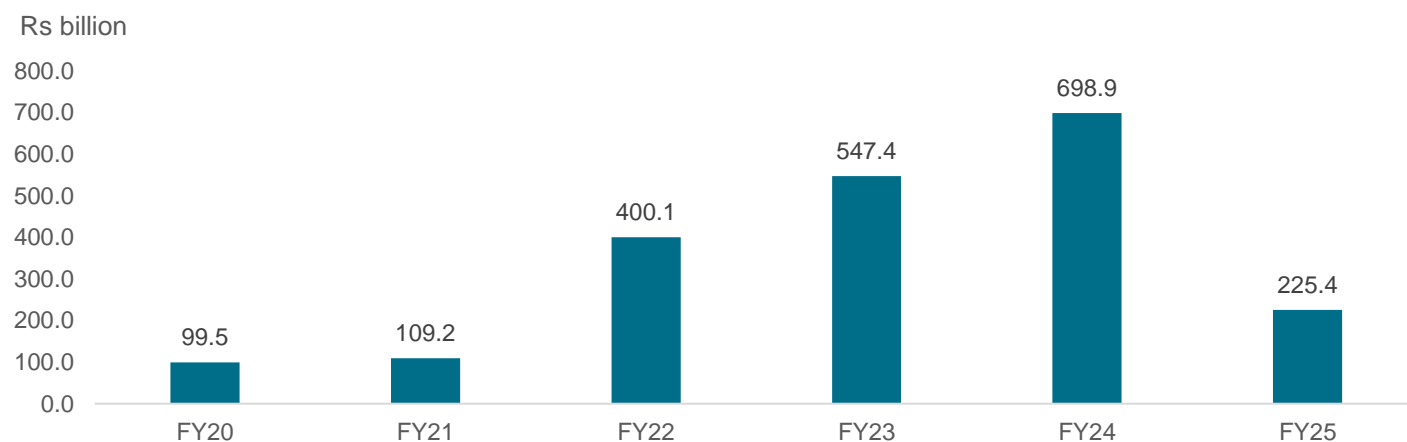
Fund distribution ratio for different states/ UTs

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

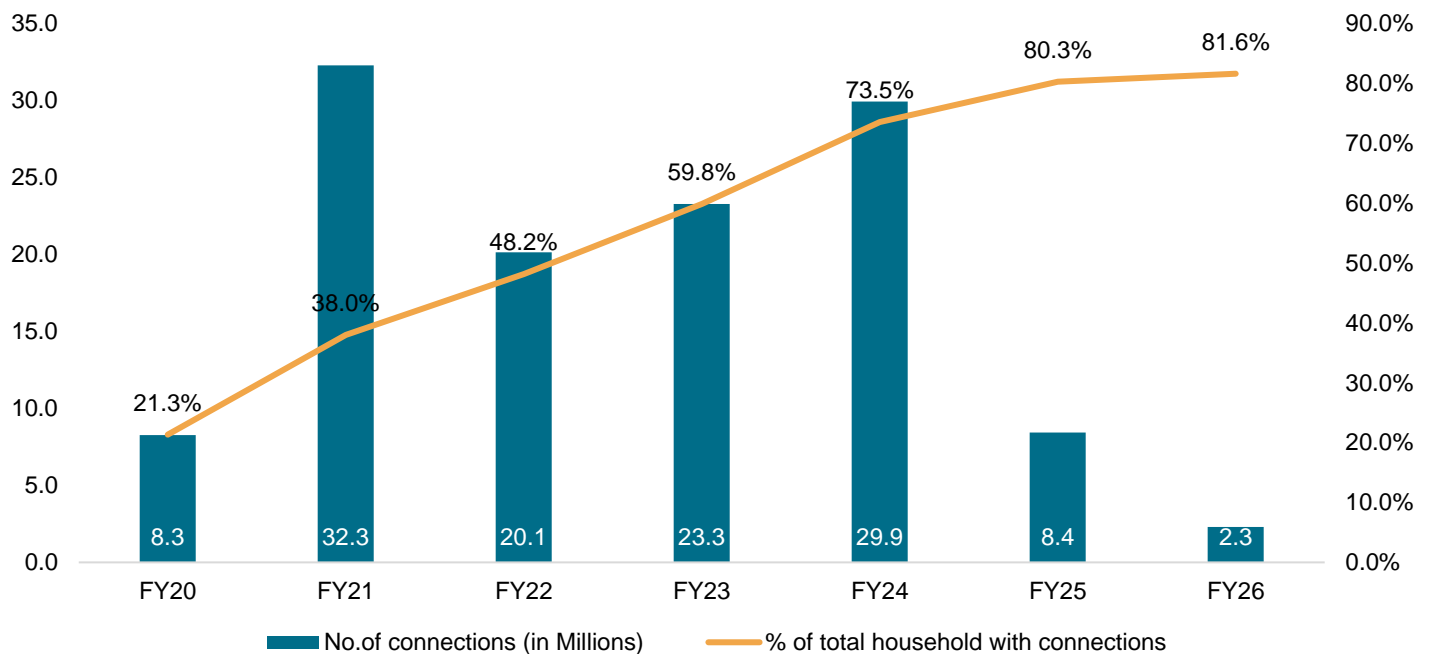


Source: JJM dashboard, Crisil Intelligence

Note: As of January 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.

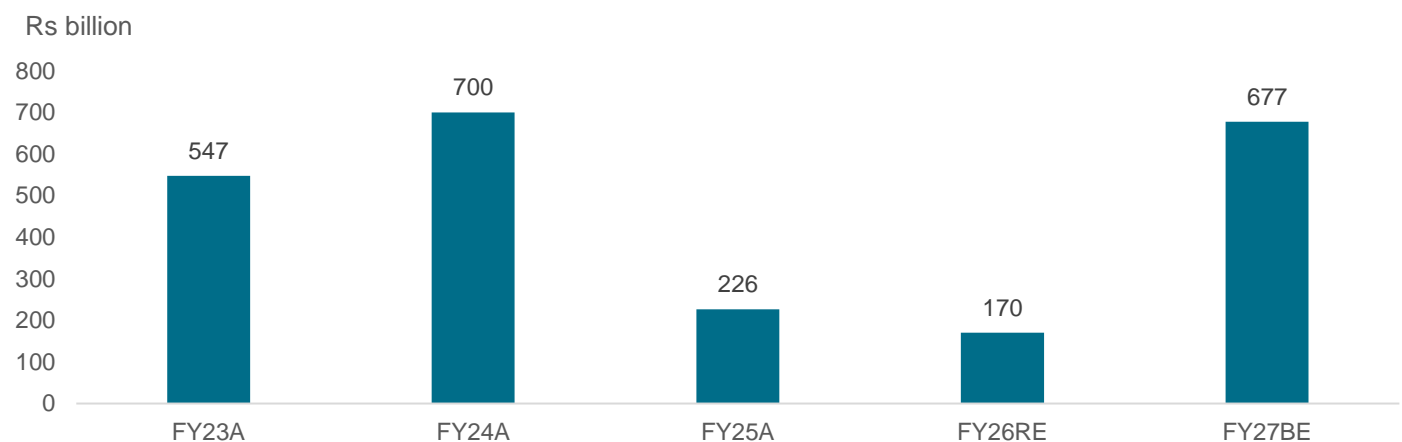
Households provided with tap water supply



Note: As of January 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

Achievements under AMRUT 2.0, as of Jun 2025

- Water supply:** 3,528 water supply projects worth Rs 1,196.37 billion approved, 18.1 million new tap connections approved, 10,647 MLD Water Treatment Plant (WTP) capacity approved. 1,487 water supply projects approved with SCADA technology
- Sewerage & Septage Management:** 592 sewerage/septage management projects worth Rs 676.08 billion approved (includes O&M cost). 6.7 million new sewer connections approved, 6,739 MLD Sewage Treatment Plant (STP) capacity approved, 235 sewerage projects approved with SCADA technology.
- Technology Sub-Mission (component of AMRUT 2.0 to encourage start-up ideas and private entrepreneurship):** 120 start-ups shortlisted and has been mapped to 82 AMRUT cities for pilot projects

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.

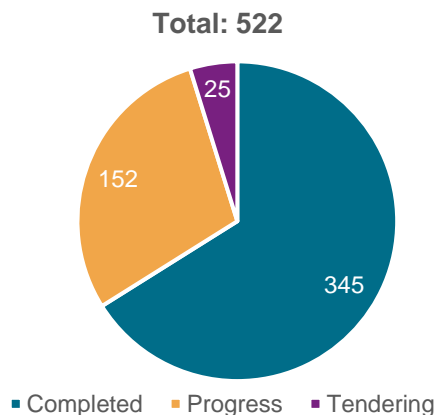
Furthermore, initiatives such as Arth Ganga aim to promote sustainable agriculture and reduce pollution in the basin area – this has seen significant success, with the adoption of sustainable agricultural practices by farmers in the Ganga basin, and the reduction of pollution from industrial and agricultural 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.

Overall, of a total of 513 under NGP, 344 projects have been completed, which represents a completion rate of ~67%, which is a notable achievement, considering the complexity and scale of the programme. The fact that 143 projects are still in progress and 26 are at the tendering stage indicates that the programme continues to have a strong pipeline of projects

Projects under NGP segregated by status



Note: As of February 2026

Source: NGP dashboard, Crisil Intelligence

Uttar Pradesh has the highest number of projects, totalling 161. The state has also made significant progress, with 101 projects completed. Uttarakhand has made significant progress as well, with 60 projects of a total of 87 completed, representing a completion rate of ~69%. In contrast, Jharkhand, Delhi and Madhya Pradesh have relatively fewer projects and will need to accelerate the pace of project implementation to meet the overall objectives of the NGP.

State-wise NGP project split by status

States	Completed	Progress	Tendering	Total
Uttar Pradesh	110	48	8	166
Uttarakhand	67	23	0	90
West Bengal	56	18	7	81
Bihar	47	19	5	71
Jharkhand	14	5	0	19
Delhi	12	14	2	28
Madhya Pradesh		6	2	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	35	15	1	51

Notes:

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

2: Numbers are as February 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 Smart Cities Mission has achieved milestones across sectors, with a total of 8,058 projects initiated. Notably, the WASH (water, sanitation, and hygiene) sector has been a major focus area, with 1,440 projects completed at a total cost of Rs 467.30 billion. The projects include significant initiatives such as the 120 MLD WTP and ZLD system under 590 MLD WTPs at Sarthana Water Works in Surat, as well as 2 MLD water treatment plant, pumping station and pipeline for conveying water from Narsinghghat and Kshipra rivers to Rudrasagar. The primary objective of these projects has been to enhance the water supply, sanitation and hygiene infrastructure in urban areas, tackling pressing concerns such as sewage management, water treatment and sewage treatment. With 106 ongoing WASH projects valued at Rs 30.05 billion, the mission continues to prioritise health and well-being of citizens.

Project progress under SCM

Sector	Completed		Work in Progress	
	No. of projects	Cost (Rs billion)	No. of projects	Cost (Rs billion)
WASH (water, sanitation and hygiene)	1440	467.30	106	30.05
Smart mobility	1582	373.62	159	42.96
Smart governance	644	162.62	41	14.00
Smart energy	676	138.64	18	3.87
Social infrastructure	848	120.73	50	11.10
Integrated Command and Control Centre	100	111.75	-	-
Economic infrastructure	839	110.88	93	18.67
Vibrant public spaces	1314	103.44	95	20.05
PPP	195	91.93	3	0.26
Smart environment	147	24.33	4	2.74

Note: As of March 2025, scheme is officially ended in March 2025

Source: SCM dashboard, Crisil Intelligence

Detailed information starting from FY18 on Budgetary allocation of government schemes related to water and wastewater sector

<u>Budgetary allocation of government policies on water and wastewater segment (Rs Billions)</u>									
	FY19A	FY20A	FY21A	FY22A	FY23A	FY24A	FY25A	FY26RE	FY27BE
Jal Jeevan Mission	54.8	100.3	110.0	631.3	547.0	699.9	226.2	170.0	677
YoY change (%)		83%	10%	474%	-13%	28%	-68%	-25%	298%
Swach Bharat Mission - Rural	129.1	82.1	49.4	31.0	49.3	65.5	36.1	60.0	71.9
YoY change (%)		-36%	-40%	-37%	59%	33%	-45%	66%	20%
AMRUT	24.6	12.6	9.9	19.5	19.3	23.9	56.5	75.0	80.0
YoY change (%)		-49%	-21%	96%	-1%	24%	136%	33%	7%
Smart city	61.8	63.9	64.5	72.8	65.0	55.9	21.3	0.0	0.0
YoY change (%)		3%	1%	13%	-11%	-14%	-62%	-100%	
Swach Bharat Mission - Urban	59.0	32.1	33.1	65.2	86.5	79.8	18.9	20.0	25.0
YoY change (%)		-46%	3%	97%	33%	-8%	-76%	6%	25%
Namami Gange program	6.9	3.5	5.0	3.5	20.5	19.2	29.8	26.9	31.0
YoY change (%)		-49%	41%	-29%	480%	-6%	55%	-10%	15%

Source: India Budget, expenditure profile, Crisil Intelligence

Notes: Till FY22 Namami gange program was called as National ganga plan and ghat works; In FY26RE and FY27BE budget for Smart city mission is not available

Roads and Highways

Overview of spend on road construction

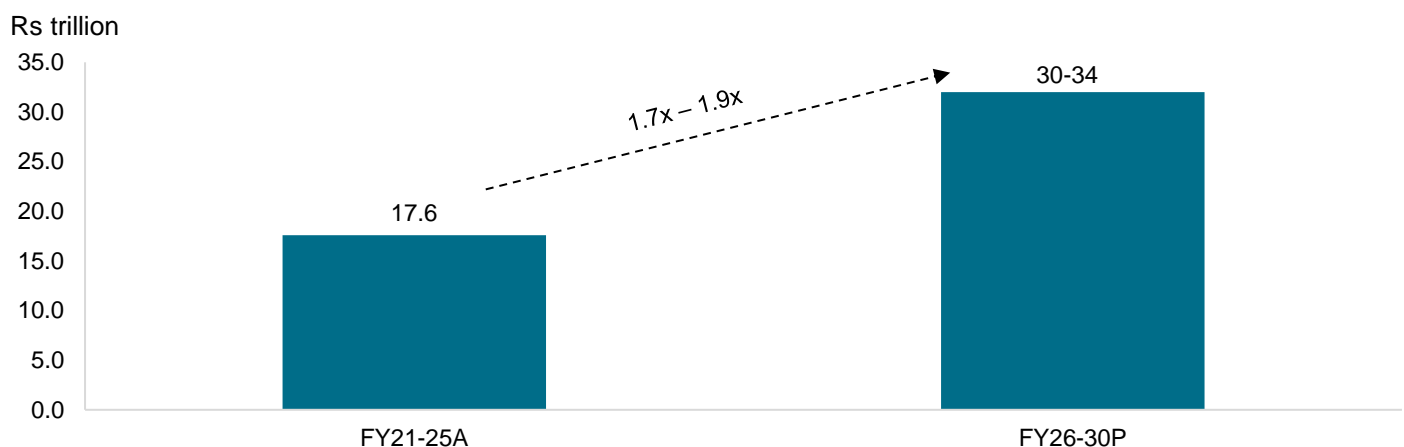
Road construction investments to grow in fiscal 2026-2030 driven by high value expressways

Investment in the road sector grew at an average annual rate of 11.8% between fiscal years 2021 and 2025, driven by a high number of national highway projects being approved and built. However, in fiscal year 2024, highway approvals dropped by 31%, bringing the total to 8,581 km. Between April and December 2024, the number of new highway projects remained similar to the previous year, but there was a boost in January-2025, adding 4,200 km. Overall highway approvals for from April till November have been 1,951 km as per reported by Ministry of Road Transport & Highways.

Since road construction usually happens around 18 months after approval, the slowdown in new projects will likely affect actual highway construction in fiscal year 2026. However, the government is shifting its focus toward building wider, high-capacity highways, so even though fewer kilometers may be constructed, spending on road infrastructure will remain high. 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.

One notable trend in the road sector is the low level of Build-Operate-Transfer (BOT) project awards, which has been negligible in recent fiscal years. However, 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.

Spend on road construction



Note: A: Actual; P: Projected

Source: Crisil Intelligence

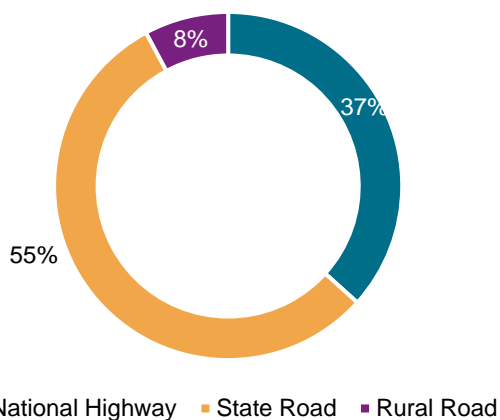
Road construction spends across Rural, State and National highways

According to Crisil Intelligence, state road capital expenditure is expected to account for ~50% of the sector's total in FY25. However, state spending on roads and highways remained stagnant in fiscals 2021 and 2022 due to limited state funds. State capital expenditure on roads and bridges witnessed significant growth in FY24, and is estimated to have further increased by 5-7% to in FY25. Although state budgets for FY26 showed an overall increase in capital outlay, the allocation for roads and bridges remained unchanged, indicating a potential plateau in spending on this critical infrastructure segment.

State roads, which include highways, major district roads and rural roads that do not come under the purview of the Pradhan Mantri Gram Sadak Yojana, constitute over 20% of the country's road network and handle ~40% of road traffic. These play an important role in the economic development of mid-sized towns and rural areas, and aid industrial development by enabling the movement of raw materials and products to and from the hinterland

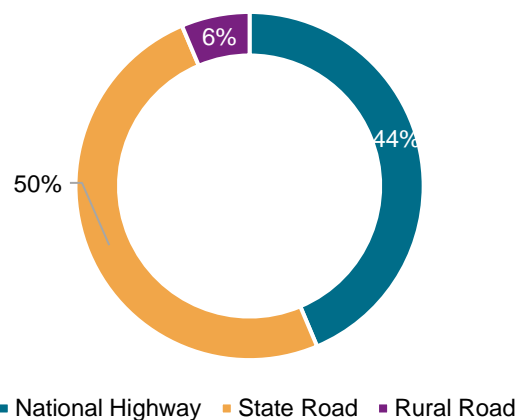
% Spend split in road construction

% road construction split (FY19)



Source: State budget documents, Crisil Intelligence

% road construction split (FY25)



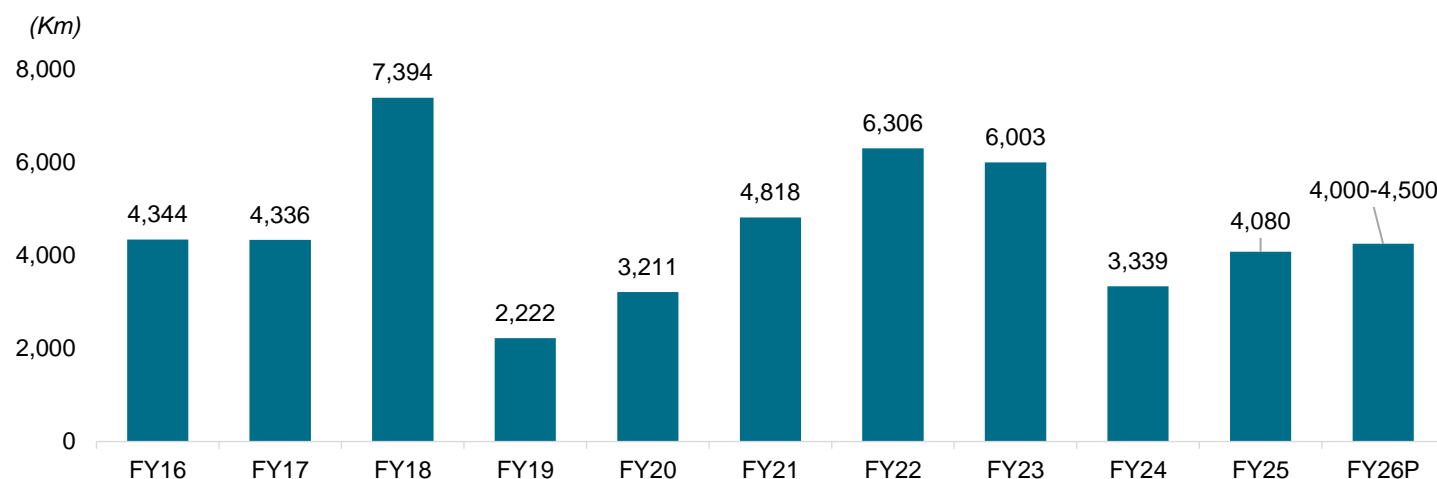
Source: State budget documents, Crisil Intelligence

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 (NHAI) awarding had witnessed a rise from merely 2,222 km in fiscal 2019 to 6,003 km in fiscal 2023. However, in fiscal 2024, awarding momentum was marred by various roadblocks. NHAI'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. NHAI awarding was ~ 3,339 kms in fiscal 2024 and in FY25 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

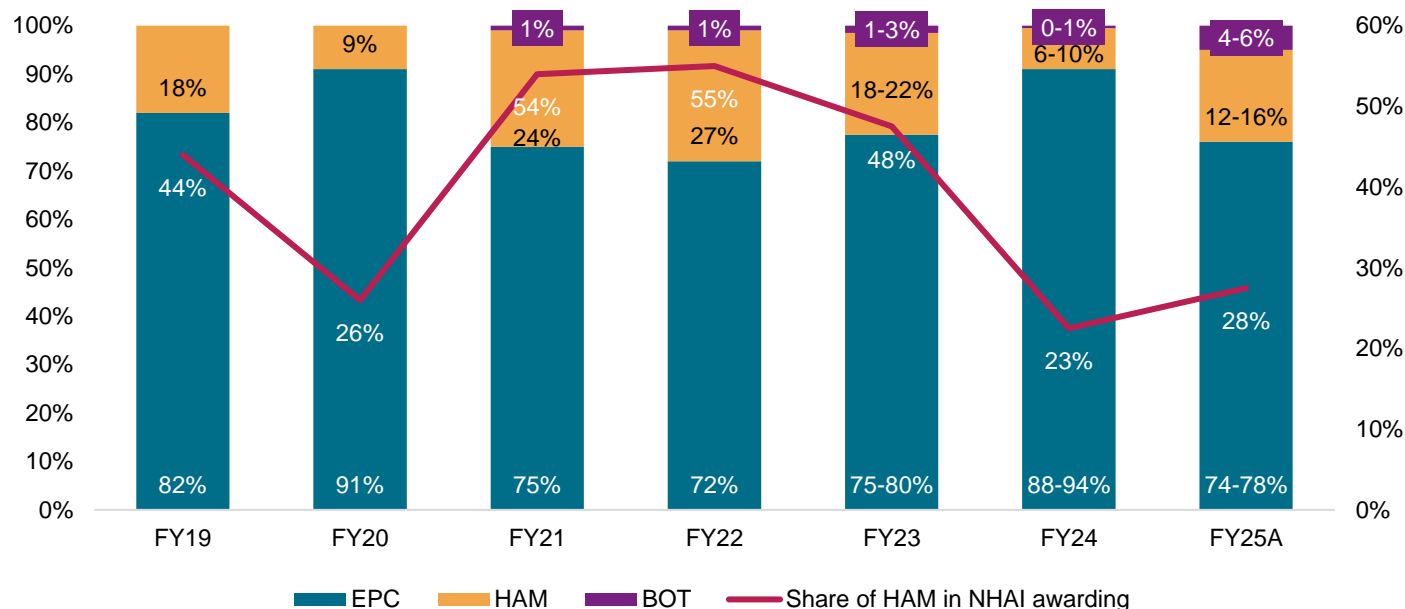
Share of BOT in NHAI awarding to be around 4-6% in fiscal 2025 on the back of amendments in the BOT MCA

The Hybrid Annuity Model (HAM) is anticipated to regain its momentum, accounting for 12-16% of total national highway infrastructure spending in fiscal 2025, up from its current share in fiscal 2024. Additionally, amendments to the Build-Operate-Transfer (BOT) Model Concession Agreement (MCA) are expected to lead to an increase in project awards under the BOT model, driven by renewed interest from developers due to favorable changes in the model.

- HAM was favored by the road developers due to lower risk and higher profitability. However, the competition in HAM awarding has increased substantially leading to average bid premiums tumbling from a peak of 15-20% to around 4-6% in the last few fiscals. As a result, share of the larger developers have dropped substantially since many large developers have refrained from bidding aggressively for HAM projects in order to protect their margins. Given the amendment in BOT MCA and the scope of higher profitability due to lower bidding competitiveness in the BOT space many large developers are keen on taking up BOT projects.
- Furthermore, owing to the healthy balance sheets the developers are also in a comfortable position to undertake BOT projects with high funding requirements.
- The increased traffic visibility vis-à-vis earlier years also augurs well for the BOT projects.

The shift towards the BOT model comes against the backdrop of NHAI facing funding challenges and moderation in growth in the central government's budgetary outlay towards the roads & highways sector. Thus, the shift will have a two-pronged benefit by not only alleviating funding challenges to a great extent but also increasing the private investments in the sector.

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



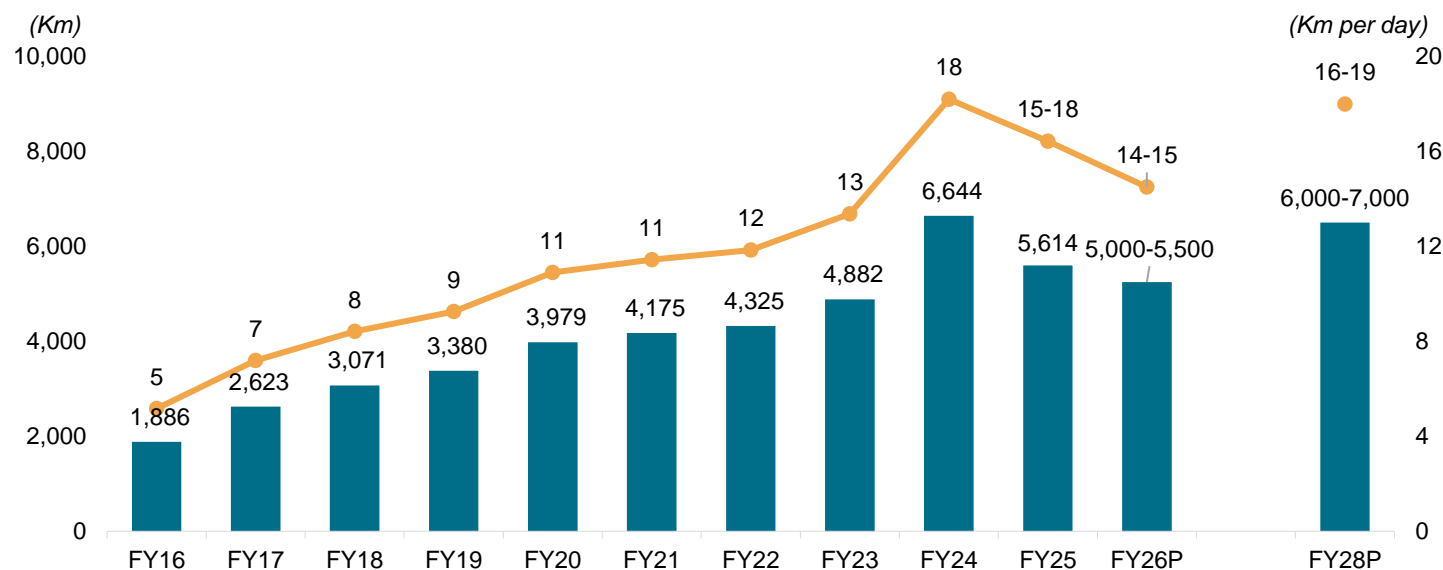
Note: A - Actual; P - Projected

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	863,589.0	Planning
2	Outer Ring Road (Amaravati) Project	Andhra Pradesh	189	649,100.0	Planning
3	Expressway (Raxaul to Haldia Port) Project	Bihar	719	600,000	Nascent
4	Versova-Virar-Palghar Sea Link Project	Maharashtra	43	8,74,272	Planning
5	Pavnar-Patradevi Maharashtra Shaktipeeth Expressway	Maharashtra and Goa	805	8,63,589	Planning
6	Expressway (Raxaul to Haldia Port) Project	Bihar, Jharkhand & West Bengal	719	600,000	Under Implementation
7	Expressway (Somnath-Dwarka) Project	Gujarat	680	571,200	Under Implementation
8	Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg	Maharashtra	701	553,350	Under Implementation

Sr no	Project	State / Union territory	Length (km)	Total cost (Rs Mn)	Status
9	Expressway (Pune-Bengaluru) Project	Maharashtra & Karnataka	745	500,000	Under Implementation
10	Gorakhpur-Siliguri Expressway Project [Package-III]	Uttar Pradesh, Bihar, West Bengal	519	386,450	Planning
11	Chambal Expressway (Kota-Etawah) Project [Atal Progressway]	Rajasthan, Madhya Pradesh & Uttar Pradesh	409	236,450	Planning

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:

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

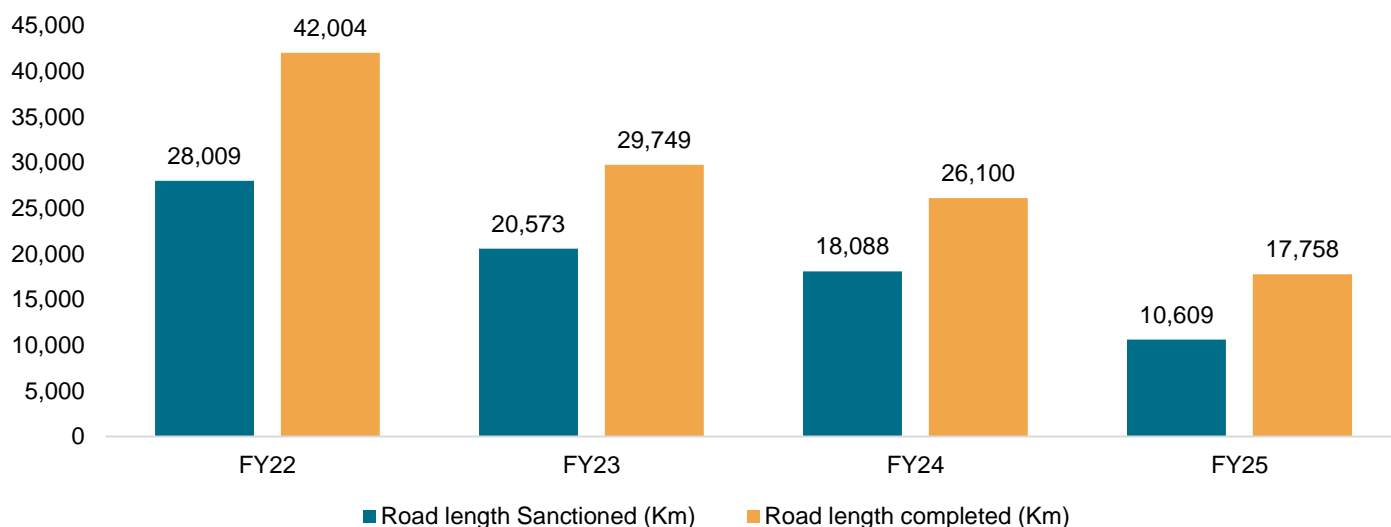
Pradhan Mantri Gram Sadak Yojana (PMGSY)

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, with 122,555 km sanctioned, 119,031 km awarded, and 96,061 km completed as of May 2025, at a total expenditure of Rs 628.44 billion.

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 January 2026, a total of 8,48,025 km of road length has been sanctioned under various PMGSY interventions, with 7,89,379 km already completed and upgraded.

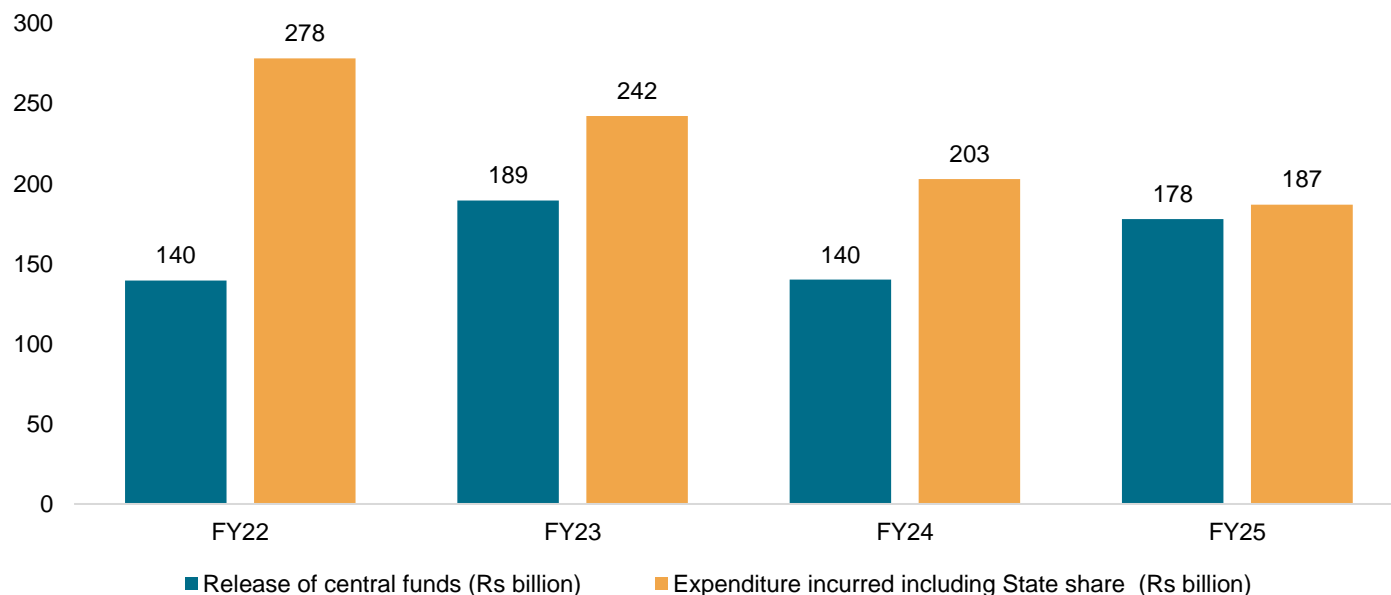
The progress of each phase is notable, with PMGSY-I achieving a completion rate of 99%, having sanctioned 629,050 km and completed 625,094 km. PMGSY-II has also shown significant progress, with 49,245 km sanctioned and 49,079 km completed. PMGSY-III has completed 96,060 km out of the sanctioned 121,387 km, achieving a completion rate of 79%. Overall, the PMGSY has made significant strides in providing rural connectivity, with a substantial portion of the targeted road length already completed and upgraded.

Completed Road length under PMGSY



Source: Data published by PIB in Aug 2025, PMGSY Dashboard, Crisil Intelligence

Funds released and expenditure incurred in PMGSY scheme



Source: Data published by PIB in Feb 2025, 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 status of works taken up under SARDP-NE as on 30th November, 2025 is as under:

Total Length (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	<p>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</p> <p>Under the Bharatmala initiative, Phase 1 targets the completion of 34,800 km of roadways, including outstanding NHDP works. As of November 2025, significant progress has been made, with 26,425 km of roads awarded and 21,597 constructed.</p>
Road Connectivity expansion in North-East Region	<p>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, are as follows for the period of 2024-25:</p> <ul style="list-style-type: none"> Completed NH projects: 389 km, with a total cost of Rs 43.52 billion Ongoing NH projects: 3,582 km, with a total cost of Rs 773.62 billion Approved NH projects yet to commence: 1,692 km, with a total cost of Rs 433.22 billion <p>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), and North East Road Sector Development Scheme (NERSDS). As of April 2025, a total of 515 projects have been completed under the DoNER scheme, with a total cost of Rs 51.35 billion. Additionally, there are 178 ongoing projects, with a total cost of Rs 42.09 billion, which are currently being implemented.</p>
PM Gati Shakti	<p>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.</p>
Focus on Rural Road Connectivity	<p>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.</p> <p>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.</p>

Growth driver	Description and reasoning
Increased focus on Road and Bridge Maintenance and Safety	<p>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.</p> <p>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.</p>
National Infrastructure Pipeline (NIP)	<p>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.</p>

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 2025, construction sector occupies a share of 15.7% 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
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

Market challenges	Description
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	<p>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.</p> <p>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.</p>

Source: Crisil Intelligence

Assessment of Power sector in India

Overview of construction spends in Indian power sector

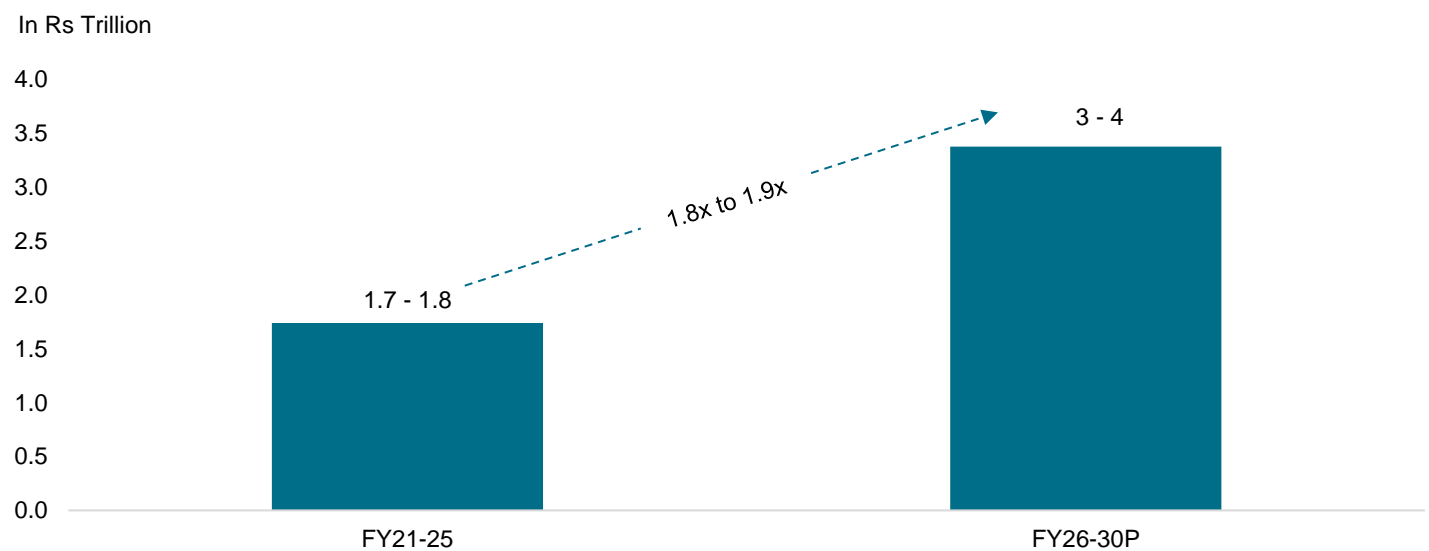
Power construction capex to grow 13-15% in FY26 led by push from renewables and T&D

Construction spending on power have risen 13-15% on year in fiscal 2026 driven by capacity additions in the renewable energy space. Significant capacity additions are anticipated in the renewable energy sector over the next five fiscal years, with projections indicating these additions will be more than three times greater than those achieved in the previous five fiscal years. This substantial increase underscores a robust shift towards renewable energy sources, driven by both technological advancements and policy support aimed at reducing carbon emissions and promoting sustainable energy.

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



Source: Crisil Intelligence

Investments in Indian power sector

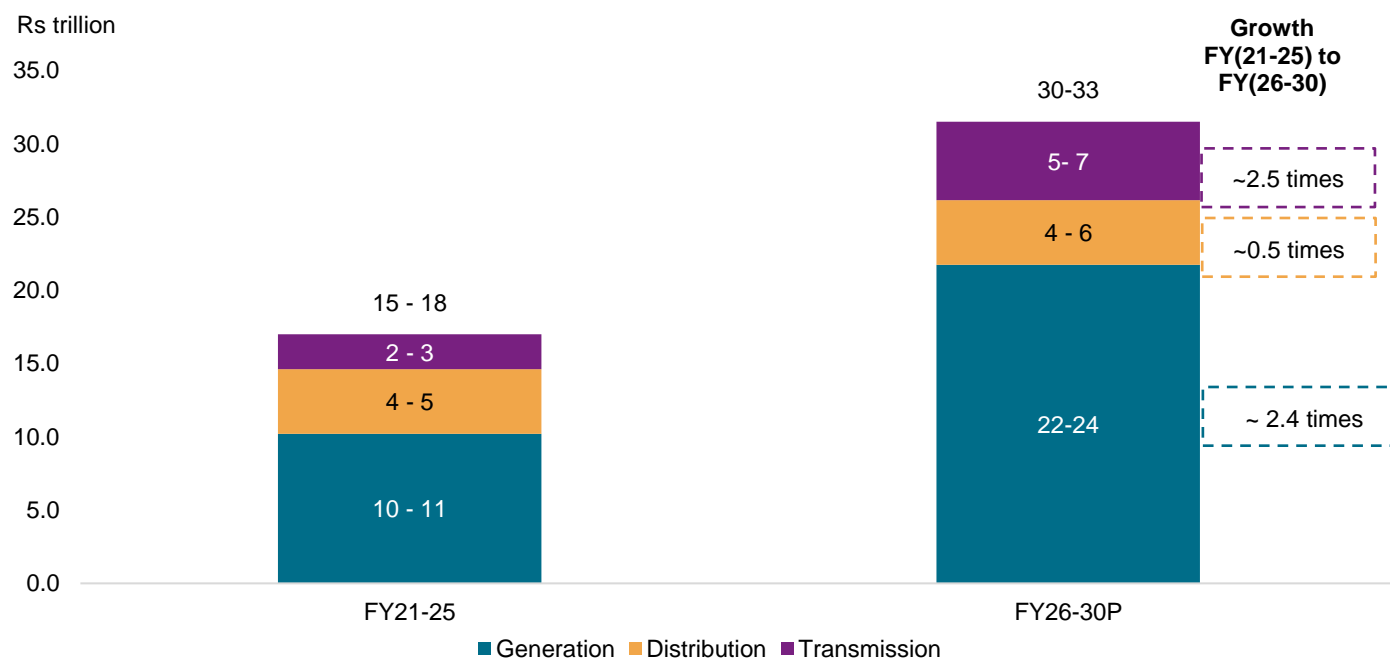
Share of green investments set to rise to ~60% between fiscal 2026-2030 from ~40% between fiscal 2021-2025

Crisil Intelligence projects investments of Rs 30-33 trillion in the power sector between fiscal 2026-2030. Investments in power generation are expected to increase ~2.4 times from Rs 10-11 trillion between fiscals 2021-2025 to Rs 22-24 trillion between fiscals 2026-2030. Investments in renewable energy (excluding hydro, pumped storage and BESS) generation capacity are expected to account for 70% 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 capacities into the grid. This is expected to lead to transmission investments of Rs 5-7 trillion between fiscals 2026-2030 from ~Rs – 2-3 trillion between fiscals 2021-2025 led by upcoming ISTS projects.

Additionally, we expect Rs 4-6 trillion worth of investments in the distribution segment between fiscal 2026-2030 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: 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 2025-2030

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 and FGD installations, indicating a shift in investment flow towards enhancing clean energy supply. Capacity addition from RE sources is expected to be 190-200 GW over fiscals 2026 to 2030, and 25-30 GW from coal-based plants sources over the same period. Investments in RE capacity, will constitute ~70% of overall generation investments.

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. However, 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. As a result, central and state sectors, which typically have higher funding accessibility and strong execution record, will lead the investments in conventional generation, accounting for over 65-70% of investments over fiscal 2026-2030.

Renewable energy evacuation, ISTS network expansion and upgradation to boost investment in transmission

Investments in the transmission 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. Also, strong execution capability coupled with healthy financials of PGCIL will drive investments.

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

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

State distribution companies (discoms), the major players undertaking investment in the distribution space, have been reeling under severe financial burden for the last few years on account of collection inefficiencies and mounting receivables to power generation companies (gencos). Revenue dipped in fiscal 2021 due to fall in demand from high-paying industrial and commercial consumers on account of reduced economic activity as a fallout of the Covid-19 pandemic.

Although the government's relief package providing loans worth Rs 1.35 trillion by Power Finance Corporation (PFC) Ltd / Rural Electrification (REC) Ltd for clearing power generators' dues eased discoms' liquidity problems in the second half of the fiscal by aiding payments of dues to gencos', the impact was short-lived with dues on the rise again post March 2021. The relief package is also expected to have worsened the debt profile of discoms, forcing them to curb investments over the medium term.

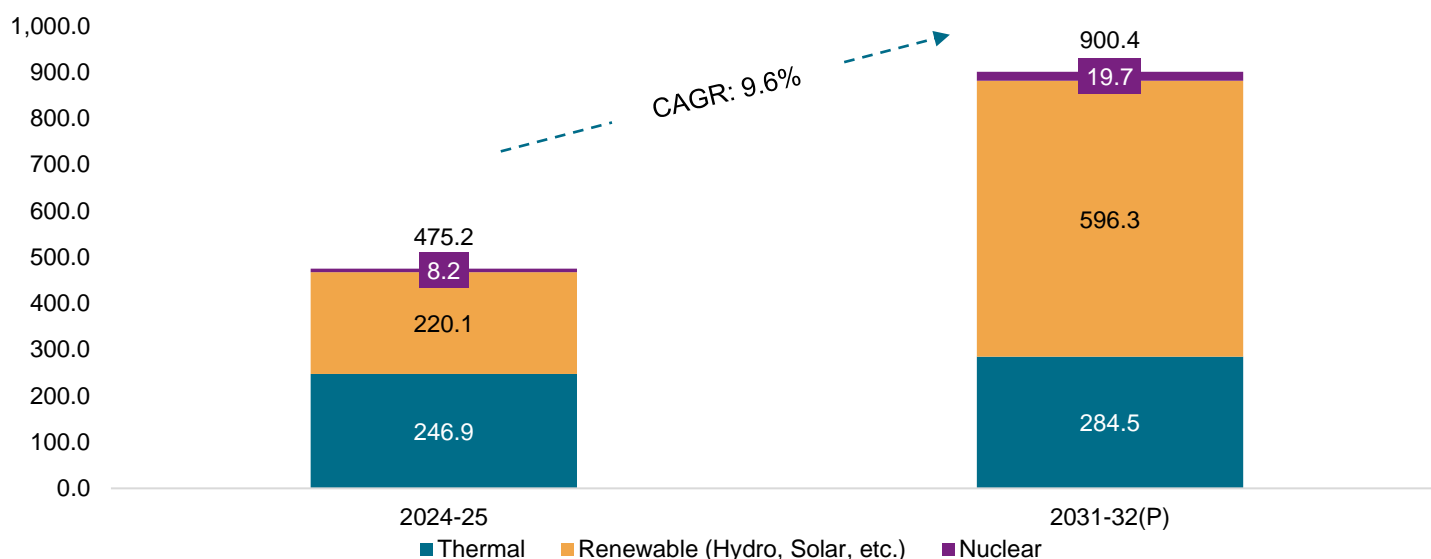
Several foreign institutions such as Japan International Cooperation Agency (JICA) and Asian Development Bank (ADB) are also expected to extend credit to the distribution sector. For instance, ADB approved a \$48 million loan to finance the

expansion and upgrading of the power distribution system in Assam. In December 2020, the ADB approved a loan of \$190 million to Bangalore Electricity Supply Company Ltd for modernisation of the power distribution system in Bengaluru city in Karnataka.

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

According to the National Energy Policy (NEP) plan, India's total power generation capacity is expected to grow at a CAGR of 9.6%. While the coal sector is anticipated to expand, albeit at a moderate pace, coal will play a crucial role in meeting peak demand due to its ability to rapidly ramp up generation. This is particularly important given the expected 5-7% CAGR growth in power demand and the intermittent nature of renewable energy sources. Furthermore, the stress on gas-based power plants, exacerbated by high gas prices and inadequate supply, has underscored the importance of coal in ensuring a reliable energy mix. As a result, coal retirements are expected to be negligible between fiscal 2026-2030.

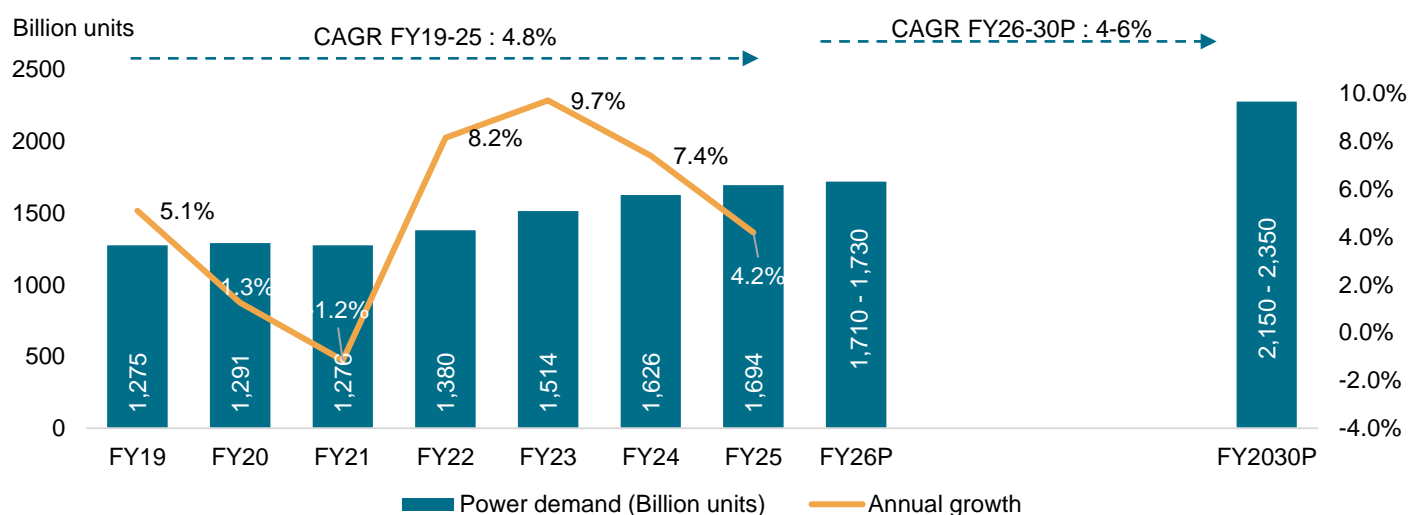
With boost to rooftop solar and declining cost of renewable energy generation, the off-grid solar generation is expected to increase, reducing power demand from grid. By fiscal 2032, installed capacity is expected to be 49-50 GW resulting in diversion of 2-3% of the power demand being met directly at consumer site. Major conventional gencos have been moving towards a more RE dominated fuel mix to address the uncertainty arising out of the imminent phasing out of thermal power generation in the distant future.

Overview of power demand in India

Power demand to maintain healthy momentum slated to grow at 5-7% CAGR over fiscals 2025-2030

India's electricity demand has been rising steadily, with a CAGR of ~4.8% between fiscals 2019 and 2025. The power demand in FY25 was 1,694 billion units. Power demand is likely to increase by 1-3% in fiscal 2026 and it is projected to clock a compound annual growth rate (CAGR) of 4-6% between fiscals 2026 and 2030, supported by economic growth and improved reach and quality of power supply. Central and state sectors are likely to drive conventional capacity additions as private capacity addition shifts towards renewable sources, with a large share of the investments geared towards increasing clean-energy supply.

Power demand across years



Source: CEA, Crisil Intelligence

The demand for electricity in India is expected to be driven by various sectors, including industrial, commercial, and domestic. The industrial and commercial sectors are expected to be the primary drivers of power demand, with significant investments in manufacturing, infrastructure development, and policies like the Production-Linked Incentive (PLI) scheme. The government's 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.

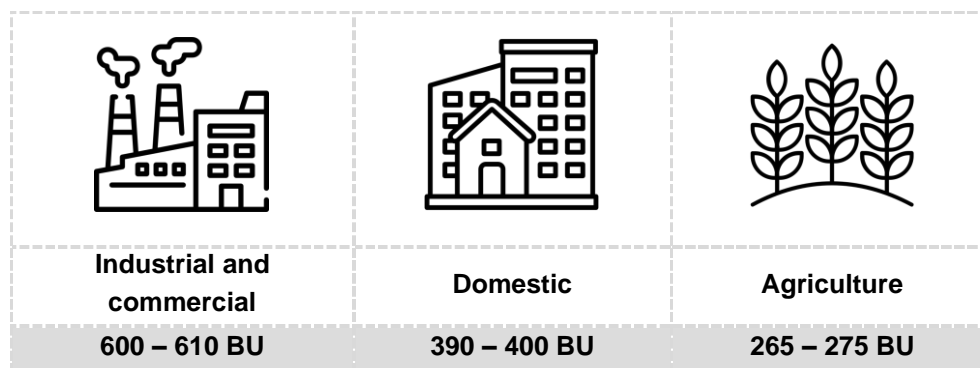
Long term growth to come from industrial push and temperature vagaries

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.

Further, domestic consumption has increased over the years due to the rising urbanisation rate, improvements in the standard of living, increase in air conditioning requirements to mitigate soaring temperatures and offering free units upto a certain level to some category/regions of India. Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya), which was launched by the GoI in September 2017, has helped achieve universal household electrification across the country. Under the scheme, 28.6 million households were electrified in the country. The scheme is completed and, in turn, drives electricity demand. The programme also aims to ensure 24x7 power supply to separate agriculture and non-agriculture feeders, facilitating judicious fostering of supply to agricultural and non-agricultural consumers in rural areas and strengthening the sub-transmission and distribution infrastructure in rural areas, including metering of distribution transformers/feeders/consumers. It is also expected that electricity currently being supplied through back-up facilities, such as invertors and DGs, may move back to the grid with increased quality of supply.

Key demand segments split across agriculture, domestic, commercial and industrial segments for power in India (FY25)



Note: BU: Billion Units

Source: CEA, Grid India, Crisil Intelligence

Industrial and commercial

Power demand from the industrial segment is estimated to rise by 5-6% on year in fiscal 2026 driven by a steady rise in real GDP at 6.5%. Normal monsoon, softening commodity prices, cooling food inflation and tax benefits announced during

the Union Budget 2025-26, and lower borrowing cost are expected to drive discretionary spending consequentially boosting industrial activity.

Manufacturing growth is expected to average 9.0% per year over fiscals 2025-2030, up from 6% on average in the pre-pandemic decade. The services sector is expected to grow slower, though it will remain the primary growth driver. As a result, the share of manufacturing in GDP will increase to ~20% from ~17% in fiscal 2025, consequently, aiding power demand

Commercial power demand completed its recovery curve in fiscal 2023 as office spaces and educational institutions reopened to full capacity. In fiscal 2026, Crisil Intelligence expects power demand from this segment to increase by 1-3% on year on account of rising urbanisation, which, in turn, will lead to growth in commercial spaces such as hospitals, educational institutions, malls, and offices

Domestic

In fiscal 2026, power demand from the domestic segment is expected estimated to be 0.5-1.5% on year as above normal rainfall in H1 fiscal 2026 is estimated to have reduced cooling requirement. Crisil Intelligence estimates temperature will continue to remain a key variable for this sector during the current fiscal and in the long term.

Climate change led warmer temperatures has 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

Agriculture

Power demand from the agriculture sector is expected to witness 1-2% 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, 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 drive agricultural power demand. However, agricultural feeder segregation and network strengthening in rural areas are 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	Ultra Super Critical Thermal Power (Charuabakhra) Project	Assam	3200 MW	480,000	Planning
2	Nuclear Based Power (Kudankulam) Project [Unit 3 & 4]	Tamil Nadu	1000 MW	398,490	Under Execution
3	HVDC Link (Paradeep-Andaman Power (Kotma) Project	Madhya Pradesh	2400 MW	360,000	Planning
4	Yadadri Coal Based Power Project	Telangana	5X800 MW	345,430	Under Implementation
5	Patratu Coal Based Power Project	Jharkhand	5X800 MW	320,000	Under Implementation
6	Hydro Electric Power (Dibang Valley) Project	Arunachal Pradesh	12X240 MW	318,760	Under Implementation
7	Coal Based Power (Janjgir-Champa) Project	Chhattisgarh	6X600 MW	270,800	Under Implementation
8	Solar-Wind Hybrid Power (Dwarka) Project	Gujarat	5000 MW	250,000	Under Implementation
9	Nuclear Based Power (Fatehabad) Project	Haryana	4X700 MWe	235,020	Under Implementation
10	Rajasthan Atomic Power Project - Stage IV	Rajasthan	2X700 MWe	229,240	Under Implementation
11	Coal Based Power (Ghatampur) Project	Uttar Pradesh	3X660 MW	217,809	Under Implementation
12	Jaitapur Nuclear Power Project	Maharashtra	6X1650 MWe	330,000	Planning
13	Oju Hydro Electric Project	Arunachal Pradesh	8X231.25 MW	313,564	Planning
14	Nabinagar Super Thermal Power Project (Stage-II)	Bihar	3X800 MW	299,479	Planning
15	Mahi Banswara Nuclear Power Project	Rajasthan	4X700 MW	297,820	Planning
16	Coal Based Power (Ramagundam) Project [Telangana STPP, Phase-II]	Telangana	3X800 MW	293,449	Planning
17	Talabira Coal Based Power Project [Phase-I]	Odisha	3X800 MW	270,000	Planning
18	Transmission System (Rajasthan REZ, Phase-III Part-I) Project	Rajasthan		250,000	Planning

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

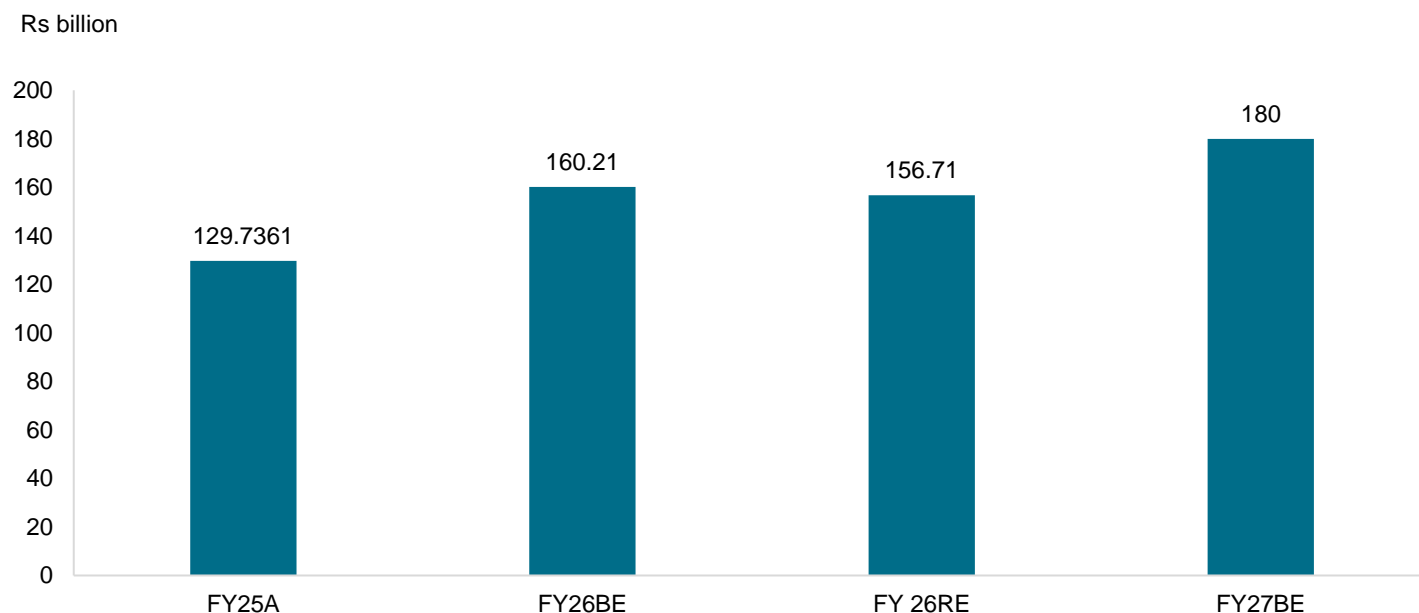
devices. The plan includes system meters and prepaid smart meters to generate system-based energy accounting reports each month, enabling discoms to make informed decisions on loss reduction, demand forecasting, time-of-day (ToD) tariffs, RE integration, and other predictive analyses

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 31st December 2025, 39.0 million smart meters have been installed under the scheme. In addition, smart meters have been installed by States under their State plans/ other schemes. Overall, 52.8 million smart meters have been installed across the country under various schemes as on 31st December 2025. As a result of collective efforts of states/UTs and various reform measures undertaken, including smart metering implementation, AT&C losses have improved from 21.91% in FY2021 to 15.04% in FY2025

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 till December 2025:

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 Website

Battery energy storage systems (BESS):

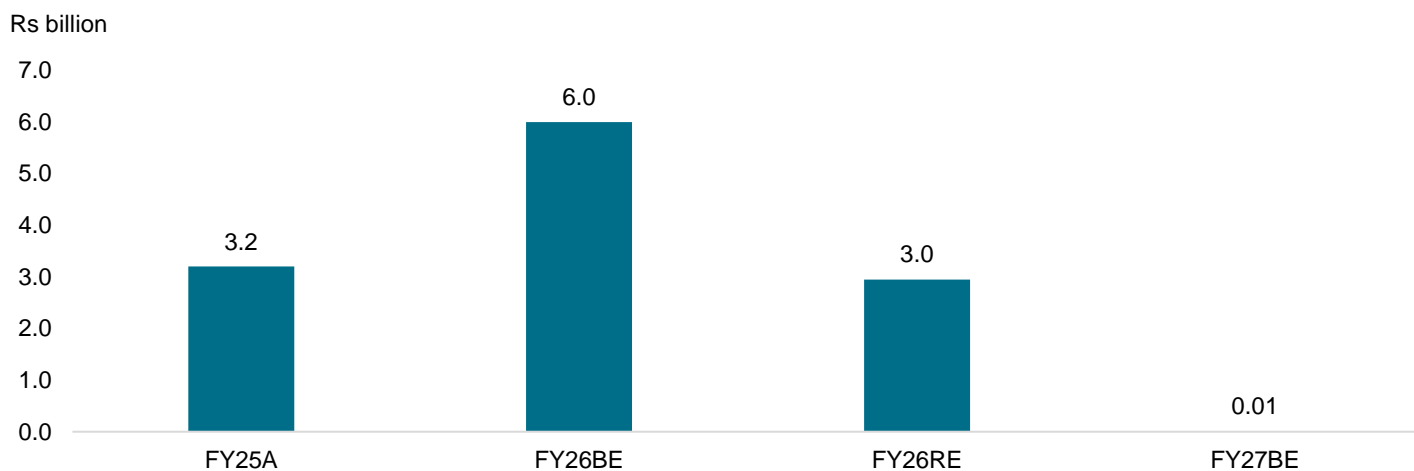
The Viability Gap Funding (VGF) scheme was introduced by the Ministry of Power to further promote cost-effective, long-duration energy storage and renewable energy integration during peak grid hours. The first tranche, approved in March 2024, carried a total outlay of Rs 94.0 billion, including Rs 37.60 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

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. With an initial estimated cost of Rs 51.13 billion, the project was designed to be funded 50% by a loan from the World Bank

As of December 2024, the NERPSIP has made significant progress, 441 elements out of 446 elements and Under Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim 182 elements out of 294 elements have been completed.

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

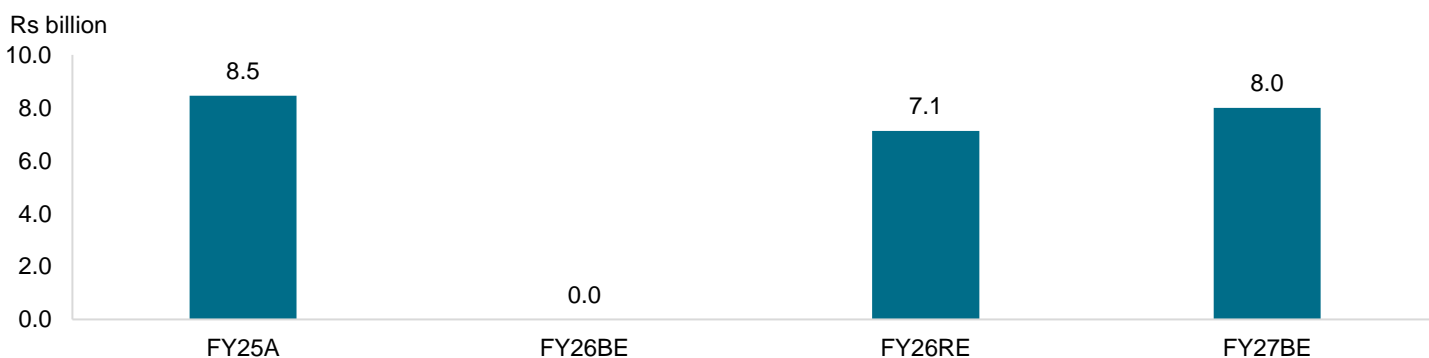
Source: Ministry of Power, Crisil Intelligence

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, with a revised completion timeline for the awarded scope of work (204 elements) and additional timeline for the unawarded packages (88 elements).

Significant progress has been made, with 175 out of 292 sanctioned elements, including lines and substations, completed. Between January 2023 and June 2024, an additional 64 elements were completed, contributing to the project's progress

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.

State	Estimated project cost (Rs Million)	Length of transmission lines envisaged (ckm)	Capacity of substations envisaged (MVA)	RE addition envisaged
Gujarat	366,729	2470	7460	5,100
Himachal Pradesh	48,949	62	761	317
Karnataka	103,625	938	1225	2,639
Kerala	42,032	224	620	452
Rajasthan	90,761	659	2191	2,478
Tamil Nadu	71,976	624	2200	4,000
Uttar Pradesh	484,786	2597	15280	4,000
Total	12,08,858	7574	29737	18,986

Note: As of August 2025

Source: Ministry of Power, Crisil Intelligence

Key growth drivers and challenges in the power sector

Key growth drivers:

Growth drivers	Description
Government push towards reducing coal imports	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Cabinet Committee on Economic Affairs has approved to develop 10,750 ckm of transmission lines and 27,500 MVA of sub-stations to support renewable energy growth with commissioned deadline by 2026
Development of T&D infrastructure	<ul style="list-style-type: none"> In December 2023, CEA has notified the draft National Electricity Plan (Volume II) for transmission which is under finalisation. 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	<ul style="list-style-type: none"> 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 5-7% between fiscal 2025 and 2029. In order to meet the rising demand the power sector is expected to see a capacity addition from 442 GW in fiscal 2024 to 700-710 GW in fiscal 2029. This addition of capacities will further aid the construction under power EPC industry.
Technological advancements	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

Company Name	Established	Geographical presence	Overview
Enviro Infra Engineers Ltd	2009	India: Uttar Pradesh, Rajasthan, Haryana, Madhya Pradesh, Chhattisgarh, Delhi, Gujarat, Karnataka, Punjab, Jharkhand	Enviro Infra Engineers provides services related to environmental infrastructure. The company's offerings include Sewage Treatment Plants (STP) and Sewage Systems (SS), 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	<p>India: Madhya Pradesh, Delhi, Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, Rajasthan, Tamil Nadu, Assam, Uttarakhand, Maharashtra</p> <p>Global: Africa, MENA and ASEAN</p>	<p>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.</p> <p>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.</p>
Technocraft Ventures Limited	1998	<p>India: Uttar Pradesh, Uttarakhand, Rajasthan, and Delhi</p>	<p>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</p>
VA Tech Wabag Limited	1995	<p>Pan India</p> <p>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</p>	<p>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.</p> <p>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.</p>

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	<p>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.</p> <p>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.</p>
Welspun Enterprises Ltd	1994	India: Uttar Pradesh, Maharashtra, Uttarakhand, Bihar, Tamil Nadu, Punjab, etc.	<p>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).</p> <p>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.</p>

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

Order book trend for the selected players
Orderbook (Rs billion)

Company Name	FY22	FY23	FY24	FY25	H1FY26
Denta Water and Infra Solutions Limited	N.A.	N.A.	N.A.	6.2	7.3
EMS Limited	8.6	14.9	18.0+	N.A.	N.A.
Enviro Infra Engineers Ltd	1.7	14.9	23.4	19.9	28.1
GA Infra Private Limited	N.A.	N.A.	N.A.	N.A.	N.A.
Gaja Engineering Private Limited	N.A.	N.A.	N.A.	N.A.	N.A.
Ion Exchange (India) Ltd	26.7	34.3	35.5	27.6	27.1
JITF Infralogistics Limited	N.A.	37.0*	40.0*	N.A.	N.A.
Technocraft Ventures Limited	4.7	3.4	7.5	7.7	6.6
VA Tech Wabag Limited	101.1	132.2	114.5	124.8	160
Vishnu Prakash R Punglia Limited	38.4	N.A.	47.2	53.6	50.0
Welspun Enterprises Ltd	84.0	101.0	122.0	143.0	156.0

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	FY22	FY23	FY24	FY25	H1FY26	CAGR (FY22-24)	CAGR (FY22-25)
Denta Water and Infra Solutions Limited	1,195.7	1,743.2	2,386.0	2,032.9	1,415.5	41.3%	19.4%
EMS Limited	3,599.2	5,381.6	7,933.1	9,658.3	4,113.6	48.5%	39.0%
Enviro Infra Engineers Ltd	2,235.3	3,381.0	7,289.2	10,660.6	4,682.7	80.6%	68.3%
GA Infra Private Limited	4,139.4	11,994.4	18,293.2	16,089.2	N.A.	110.2%	N.Ap.
Gaja Engineering Private Limited	16,148.8	12,061.3	16,415.4	12,325.1	N.A.	0.8%	N.Ap.
Ion Exchange (India) Ltd	15,768.7	19,896.1	23,478.5	27,371.1	13,171.3	22.0%	20.2%
JITF Infralogistics Limited	12,347.9	15,902.9	32,835.6	22,648.1	10,877.0	63.1%	22.4%
Technocraft Ventures Limited	1,205.8	1,786.9	2,261.0	2,795.6	1,509.8	36.9%	32.4%
VA Tech Wabag Limited	29,793.0	29,605.0	28,564.0	32,940.0	15,685.0	-2.1%	3.4%
Vishnu Prakash R Punglia Limited	7,856.1	11,684.0	14,738.7	12,374.2	5,720.9	37.0%	16.4%
Welspun Enterprises Ltd	13,423.3	27,581.9	28,722.8	35,841.0	16,289.7	46.3%	38.7%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY25 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

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

YoY Growth in revenue from operations (%)

Company Name	FY23	FY24	FY25
Denta Water and Infra Solutions Limited	45.8%	36.9%	-14.8%
EMS Limited	49.5%	47.4%	21.7%
Enviro Infra Engineers Ltd	51.3%	115.6%	46.3%
GA Infra Private Limited	189.8%	52.5%	-12.0%
Gaja Engineering Private Limited	-25.3%	36.1%	-24.9%
Ion Exchange (India) Ltd	26.2%	18.0%	16.6%
JITF Infralogistics Limited	28.8%	106.5%	-31.0%
Technocraft Ventures Limited	48.2%	26.5%	23.6%
VA Tech Wabag Limited	-0.6%	-3.5%	15.3%
Vishnu Prakash R Punglia Limited	48.7%	26.1%	16.0%
Welspun Enterprises Ltd	105.5%	4.1%	24.8%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY25 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

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	FY22	FY23	FY24	FY25	H1FY26	CAGR (FY22-24)	CAGR (FY22-25)
Denta Water and Infra Solutions Limited	518.1	669.6	791.4	676.8	461.4	24%	9.3%
EMS Limited	1,127.1	1,500.0	2,038.5	2,511.7	902.8	34%	30.6%
Enviro Infra Engineers Ltd	500.2	845.1	1,665.0	2,667.6	1,291.5	82%	74.7%
GA Infra Private Limited	451.9	1,296.0	2,339.5	2,158.6	N.A.	128%	N.Ap.
Gaja Engineering Private Limited	3,991.9	2,751.2	2,331.6	1,406.9	N.A.	-24%	N.Ap.
Ion Exchange (India) Ltd	2,132.1	2,549.9	2,719.4	2,938.2	1,310.3	13%	11.3%
JITF Infralogistics Limited	1,495.6	2,594.3	4,783.2	4,045.3	2,456.8	79%	39.3%
Technocraft Ventures Limited	138.6	218.8	335.7	477.1	260.5	56%	51.0%
VA Tech Wabag Limited	2,369.9	3,178.0	3,757.0	4,223.0	1,985.0	26%	21.2%
Vishnu Prakash R Punglia Limited	868.7	1,565.8	2,098.9	1,554.6	562.6	55%	21.4%
Welspun Enterprises Ltd	1,500.5	2,476.4	4,254.4	5,216.9	3,545.5	68%	51.5%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY25 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

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	FY22	FY23	FY24	FY25	H1FY26
Denta Water and Infra Solutions Limited	43.3%	38.4%	33.2%	33.3%	32.6%
EMS Limited	31.3%	27.9%	25.7%	26.0%	21.9%
Enviro Infra Engineers Ltd	22.4%	25.0%	22.8%	25.1%	27.6%
GA Infra Private Limited	10.9%	10.8%	12.8%	13.4%	N.A.
Gaja Engineering Private Limited	24.7%	22.8%	14.2%	11.4%	N.A.
Ion Exchange (India) Ltd	13.5%	12.8%	11.6%	10.7%	9.9%
JITF Infralogistics Limited	12.1%	16.3%	14.6%	17.9%	22.6%
Technocraft Ventures Limited	11.5%	12.2%	14.8%	17.1%	17.3%
VA Tech Wabag Limited	8.0%	10.7%	13.2%	12.8%	12.7%
Vishnu Prakash R Punglia Limited	11.1%	13.4%	14.2%	12.6%	9.8%
Welspun Enterprises Ltd	11.2%	9.0%	14.8%	14.6%	21.8%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY25 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

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

Profit after tax (Rs million)

Company Name	FY23	FY24	FY25	H1FY26	CAGR (FY22-24)	CAGR (FY22-25)
Denta Water and Infra Solutions Limited	498.5	604.7	528.9	374.8	26%	11%
EMS Limited	1,088.5	1,526.6	1,837.8	662.0	39%	33%
Enviro Infra Engineers Ltd	574.5	1,064.6	1,771.5	1,004.9	76%	72%
GA Infra Private Limited	786.5	1,408.9	1,044.3	N.A.	128%	N.Ap.
Gaja Engineering Private Limited	2,098.1	1,931.9	1,394.9	N.A.	-13%	N.Ap.
Ion Exchange (India) Ltd	1,949.7	1,953.5	2,082.5	983.6	10%	9%
JITF Infralogistics Limited	-1,071.4	908.2	-244.3	-207.0	N.Ap.	N.Ap.
Technocraft Ventures Limited	108.1	190.5	282.0	155.51	79%	68%
VA Tech Wabag Limited	110.0	2,504.0	2,948.0	1,506.0	38%	31%
Vishnu Prakash R Punglia Limited	906.4	1,221.9	586.0	106.6	65%	9%
Welspun Enterprises Ltd	6,844.2	3,488.4	3,835.7	1,967.3	109%	69%

Note: N.A. – Not Available; N.Ap. – Not Applicable, FY25 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

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

Financial Ratios (FY24)

Company Name	PAT %	ROE	ROCE	Gearing ratio	Current Ratio	Interest coverage ratio
Denta Water and Infra Solutions Limited	25.0%	45.0%	49.6%	0.01	3.2	162.5
EMS Limited	18.9%	23.6%	24.5%	0.09	6.6	34.9
Enviro Infra Engineers Ltd	14.4%	50.7%	32.3%	0.81	1.5	7.8
GA Infra Private Limited	7.7%	48.3%	27.7%	1.30	1.6	5.2
Gaja Engineering Private Limited	11.4%	17.4%	22.9%	0.00	3.1	25.3
Ion Exchange (India) Ltd	8.2%	21.1%	23.8%	0.13	1.5	26.3
JITF Infralogistics Limited	2.7%	0.0%	0.0%	N.Ap	1.5	1.7
Technocraft Ventures Limited	8.4%	23.2%	19.6%	0.87	1.6	4.4
VA Tech Wabag Limited	8.6%	14.7%	19.4%	0.15	1.7	5.8
Vishnu Prakash R Punglia Limited	8.2%	23.6%	18.6%	0.55	1.7	5.1
Welspun Enterprises Ltd	10.4%	13.2%	18.1%	0.30	1.9	5.6

Note: *On a consolidated basis; N.A. – Not Available; N.Ap. – Not Applicable, FY25 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

OPBDIT % = OPBDIT / Revenue from operations

PAT % = PAT / Total income

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 (FY25)

Company Name	PAT %	ROE	ROCE	Gearing ratio	Current Ratio	Interest coverage ratio
Denta Water and Infra Solutions Limited	25.4%	18.5%	17.6%	0.00	20.3	201.8
EMS Limited	18.7%	20.7%	24.2%	0.09	8.2	31.7
Enviro Infra Engineers Ltd	16.3%	27.6%	22.6%	0.24	3.1	7.7
GA Infra Private Limited	6.4%	24.6%	20.1%	1.40	1.4	3.4
Gaja Engineering Private Limited	10.7%	10.9%	15.4%	0.0	2.8	15.5
Ion Exchange (India) Ltd	7.5%	18.7%	19.4%	0.25	1.5	25.5
JITF Infralogistics Limited	-1.1%	0.0%	0.0%	N.Ap	1.4	1.3
Technocraft Ventures Limited	10.0%	26.6%	22.8%	0.73	1.8	5.4
VA Tech Wabag Limited	8.8%	14.9%	18.4%	0.17	1.7	6.0
Vishnu Prakash R Punglia Limited	4.7%	7.8%	10.0%	0.91	1.5	2.4
Welspun Enterprises Ltd	9.3%	13.6%	16.1%	0.55	1.8	4.6

Note: *On a consolidated basis; N.A. – Not Available; N.Ap. – Not Applicable, FY25 numbers are taken from financial statements whereas rest all numbers are taken from respective annual reports

OPBDIT % = OPBDIT / Revenue from operations

PAT % = PAT / Total income

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

Crisil Limited




Name : Dharmendra Sharma
Director : Business Development

About Crisil Intelligence (formerly Market Intelligence & Analytics)

Crisil Intelligence is a leading provider of research, consulting, risk solutions and advanced data analytics, serving clients across government, private and public enterprises. We leverage our expertise in data-driven insights and strong benchmarking capabilities to help clients navigate complex external ecosystems, identify opportunities and mitigate risks. By combining cutting-edge analytics, machine learning and AI capabilities with deep industry knowledge, we empower our clients to make informed decisions, drive business growth and build resilient capacities.

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Crisil is a global, insights-driven analytics company. Our extraordinary domain expertise and analytical rigour help clients make mission-critical decisions with confidence.

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