



Driving Make in India: A compendium of central and state government incentives

A KPMG in India and HSBC India collaboration



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पीयूष गोयल
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भारत सरकार
MINISTER OF COMMERCE & INDUSTRY
GOVERNMENT OF INDIA



MESSAGE

India is entering a transformative era of resilient and dynamic growth, with a steadfast commitment to fostering a thriving ecosystem for both domestic and global businesses. The Government has introduced comprehensive measures to enhance ease of doing business, drive high-quality production and strengthen economic fundamentals. These initiatives have propelled robust industrial production and achieved record-breaking merchandise exports, even amidst global supply chain challenges.

Make in India, now in its 10th year, after its launch by Hon'ble Prime Minister Narendra Modi on September 25th, 2014, stands as a hallmark initiative of collaborative success between the Government (both Center and States) and Corporates (both Multinational and Indian). The Ministry takes immense pride in the progress achieved through this visionary program, which, through targeted incentives, transformative reforms and an unwavering focus on innovation, has empowered industries to build a self-reliant economy. This initiative has positioned India as a pivotal hub for global supply chains and a reliable and resilient partner for global businesses.

Our Government remains steadfast in its commitment to fostering an environment where businesses can thrive. Through strategic incentives and transformative policy reforms, we aim to empower industries to innovate, generate employment and contribute to India's vision of becoming a global economic powerhouse.

In this pursuit, I extend my gratitude to HSBC and KPMG for developing a comprehensive compendium summarizing Central and State incentives. This valuable resource will serve as a strategic and effective guide, providing investors and companies with critical insights and information. I strongly encourage stakeholders to leverage the diverse schemes offered by both Central and State Governments to capitalize on the immense growth opportunities our nation presents.

Piyush Goyal

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Foreword (KPMG in India)

India's economic ascent continues to inspire confidence globally, driven by robust growth across sectors and states. With strategic reforms, forward-thinking policies and a rapidly evolving industrial ecosystem, India has established itself as a premier investment destination. The country's unwavering commitment to innovation, sustainability and inclusive development continues to position India for sustained long-term growth.

This report, 'Driving Make in India: A compendium of central and state government incentives', developed in collaboration with HSBC India, highlights the concerted efforts undertaken by central and state governments to foster ease of doing business and enhance India's position as a global manufacturing and innovation hub. The report serves as a strategic blueprint for navigating India's incentives, policies and reforms landscape that underpin India's growth story, while uncovering opportunities in areas such as foreign direct investment (FDI) potential, MSME sector expansion, job creation and supply chain localisation.

Today, the Indian economy is being reshaped by initiatives like the Production Linked Incentive (PLI) scheme, increasing government outlays that facilitate sectoral ecosystem and an array of robust policies, which enable a unified approach to drive synergistic growth. These initiatives are not just policies on paper but are driving real change on the ground.

As transformative reforms and steady investments shape emerging sectors like high-value

manufacturing, technology and energy, India's global competitiveness continues to strengthen, solidifying its position as a trusted and reliable partner at the global stage.

While national initiatives lay the groundwork, the unique state-level strategies—ranging from incentives for sector-specific hubs and corridors to investment facilitation frameworks—play a crucial role in enhancing and complementing these initiatives. Indian states have been at the forefront of strategic policy development, creating industrial hubs and specialised investment zones. These efforts, combined with regulatory ease and infrastructure enhancements, have been instrumental in attracting major global giants and driving significant FDI inflows underscoring the exemplary growth and transformation in the Indian economy.

As India progresses on its ambitious journey to become a global growth leader and a developed nation by 2047, I am pleased to present this compendium, which not only underscores India's vast economic potential but also highlights the proactive measures the country has undertaken to foster an investor-friendly environment. By providing detailed insights and actionable information, this report will empower investors to make informed decisions and capitalise on the numerous opportunities across various sectors and states in India.

Yezdi Nagporewalla

Chief Executive Officer
KPMG in India

Foreword (HSBC India)

India stands at the crossroads of tremendous economic opportunities, driven by a robust, dynamic workforce, a rapidly growing consumer base, and a commitment to innovation and technological advancement. Among the fastest-growing large economies globally, it is set to become the world's third-largest economy. With an evolving economic landscape and a host of government-led initiatives, infrastructure development, and pro-business policies, India has emerged as one of the world's most attractive investment destinations.

The Indian government has rolled out a wide array of incentives aimed at attracting both foreign and domestic investments across key sectors including manufacturing, services, infrastructure, technology, and more. These initiatives are not only designed to stimulate economic growth but also to create jobs, encourage sustainable development, and foster a thriving entrepreneurial ecosystem. At a time when the global economy is navigating challenges and uncertainties, India's trajectory remains one of optimism. The country's economic resilience, coupled with its strategic reforms, provide consistency, continuity and predictability to global investors.

As a global financial institution with deep expertise in supporting businesses in their growth aspirations,

we at HSBC partner our clients, both domestic and international as they expand business opportunities in this key market. We believe it is crucial for investors to remain well-informed of the diverse incentives available, which can significantly enhance the attractiveness and profitability of their investments.

This compendium that we have created with KPMG in India serves as an invaluable resource for investors, both global and local, providing a detailed overview of the various fiscal incentives, tax benefits, and regulatory support available at both the central and state levels. The incentives outlined here represent India's unwavering commitment to creating an investor-friendly environment, designed to ease the process of doing business and unlock new avenues for growth.

I hope this compendium not only highlights the exceptional opportunities within India across key sectors but also reinforces the shared goal of building a more prosperous future for investors, businesses, and communities alike.

Together, let us navigate this exciting landscape and unlock the immense opportunities that India presents!

Hitendra Dave

Chief Executive Officer
HSBC India

Executive summary

India's growth trajectory is poised for a significant uplift, driven by central and state governments' incentives, strategic initiatives and policy support across key sectors. The report explores the sector-specific incentives and regional policy frameworks that make India a prime destination for global investors.

- The report delves into the critical drivers of India's economic engine, highlighting the electronics system design and manufacturing (ESDM), semiconductor, renewable energy, automotive, battery storage, data centre and logistics sectors along with sunrise sectors, including space and railway
- Each of these sectors showcases a transformative impact due to progressive policies, investments and positive market demand. Tailored government incentives underscore the commitment to foster innovation, enhance infrastructure and ensure sustainable growth
- These strategic initiatives provide further boost to the Make in India initiative, which aims to enhance the country's manufacturing capabilities recognised as the pivotal new fuel for growth with a significant emphasis on fostering self-reliance across sectors.

Government incentives, initiatives and policy support as catalysts for growth:

- The report covers an overview of the sectors with a focus on policy frameworks, financial incentives and market trends that make India a lucrative destination for global investors
- India's economic framework is sustained by its core sectors, which are propelled by pragmatic government policy support in terms of incentives and substantial reforms aimed at fostering an environment conducive to business expansion
- The synergy of central and state government initiatives, coupled with the strategic push in key and emerging sectors, paints a compelling picture of India's economic potential and its alignment towards becoming a global manufacturing and innovation hub.

Synergy of policies as a testament to cooperative federalism with states introducing initiatives to drive state-led growth engines:

- In recent years, the relaxation in the FDI policy has also refocused states' priorities to attract investors, leveraging the reformative policy framework adopted by the Government of India (GoI)
- Different states have introduced policies and initiatives across various sectors, along with strategic regional infrastructure investments, to highlight the distinct advantages offered by diverse regions of India. These efforts aim to guide investors to regions with unique economic specialisations, policy support and infrastructural capabilities.

Facilitating financial and technological innovation:

- The report explores the potential of the Gujarat International Finance Tec-City (GIFT City) as a global hub for financial services, investment and government's support to expand the ecosystem in coming years
- GIFT City's growing contributions to the economy and its strategic importance in propelling India's financial future have also attracted global investment with a well-established network of international and domestic banks already operating in the upcoming global financial centre.

The report emphasises the importance of state-specific initiatives and their contributions to India's growth narrative as states have set ambitious targets, supported by significant investments and policy measures tailored to enhance their local economies.

The details provided in the report encapsulate India's strategic intent and proactive measures in creating a thriving investment climate bolstered by government incentives, policy reforms and infrastructural advancements and serve as a strategic guide for stakeholders keen on tapping into the country's vast investment landscape.

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Chapter 1

Sectoral growth enablers

Key government incentives and support across sectors



India's economic landscape is characterised by robust growth and strategic government initiatives, fostering an environment conducive to both traditional and emerging sectors. This chapter highlights government support through policies, incentives, funding and capital outlay involving multiple schemes underscoring India's commitment to fostering industrial growth and innovation.

The analysis outlines the pivotal role of technological advancements, sustainable practices and innovation in driving sectoral growth. With initiatives such as the PLI scheme and the establishment of special economic zones (SEZs), India is poised to harness its demographic advantage and robust infrastructure to attract investments.

This section also covers key policy interventions around the sunrise sectors of the Indian economy. Emerging sectors, such as the space sector, along with a resurgent railway sector highlight India's transition into an innovation-driven economy while promoting attractiveness of traditional sectors. Policies aimed at attracting investments to boost innovation, introduce new technologies and ensure sustainable development are pivotal in this transformation.

Snapshot of central government policies, support and incentives for sectors identified in the study

Key sectors	Key government incentives, initiatives and policies	Support, incentives and initiatives offered along with capital outlay
ESDM	National Policy on Electronics 2019 (NPE) ¹	The policy aims to boost exports and develop critical components such as chipsets.
	Phased Manufacturing Programme (PMP) ²	This programme provides assistance to boost local production of electric vehicles (EVs), including their assemblies, sub-assemblies and various components, outlining a progressive duty structure designed to increase domestic manufacturing.
	PLI scheme ³	The scheme offers incentives ranging from 4–6 per cent on incremental sales of domestically manufactured goods, targeting up to USD5 billion in incentives over five years, to stimulate mobile phone manufacturing and specific electronic components production.
	Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) ⁴	The scheme offers 25 per cent financial incentives on capital expenditure for manufacturing of electronic components and semiconductor/display fabrication units.
	Modified Electronics Manufacturing Clusters (EMC 2.0) (Also applicable for semiconductor sector) ⁵	For the EMC project, financial assistance will be restricted to 50 per cent of the project cost subject to a ceiling of USD8.4 million for every 100 acres of land For Common Facility Centres (CFCs) financial assistance will be restricted to 75 per cent of the project cost subject to a ceiling of USD9 million.
Semiconductor	PLI scheme for semiconductor fabrication ⁶	The programme provides financial assistance of up to 50 per cent of the project cost for boosting large-scale investments and allocates USD10 billion in incentives to attract investments in semiconductor fabrication to promote domestic production.
	The Semicon India Future Design ⁷	The programme provides up to 50 per cent of eligible expenditure with a cap of USD1.8 million per application and a sales turnover-based incentive of 4–6 per cent over five years.

Note: Exchange rate of USD1 = ~INR83-INR84 is considered for currency conversion in the report.

1 National Policy on Electronics 2019 (NPE), Ministry of Electronics and Information Technology, accessed in October 2024

2 Phased Manufacturing Programme, Ministry of Electronics and Information Technology, accessed in October 2024

3 Production Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing, Ministry of Electronics and Information Technology, accessed in October 2024

4 Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS), Ministry of Electronics and Information Technology, accessed in October 2024

5 Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme, Ministry of Electronics and Information Technology, accessed in October 2024

6 US\$ 10 billion semiconductor PLI to help India do in a decade what China did in 25-30 years, IBEF, accessed in October 2024

7 Government of India taking steps to encourage domestic manufacturing of semiconductors & promote country's digital transformation and self-reliance, PIB, accessed in October 2024

Key sectors	Key government incentives, initiatives and policies	Support, incentives and initiatives offered along with capital outlay
Renewable energy	Renewable Purchase Obligations (RPO) ⁸	This initiative is aimed at implementing a centralised, web-based system to monitor RPO compliance across all states and union territories, ensuring efficient tracking of renewable energy transactions for registered organisations.
	PLI scheme for renewable energy ⁹	The Ministry allotted INR19,500 crore (USD2.4 billion), with a commitment towards increasing domestic solar manufacturing capability, in Tranche-II and it is expected to develop 65 GW of annual manufacturing capacity.
	PM Surya Ghar: Muft Bijli Yojana ¹⁰	<ul style="list-style-type: none"> The scheme aims to provide USD9 billion through subsidies of up to 60 per cent on solar unit cost In the Union Budget 2024–2025, Gol allocated a sum of INR6,250 crore (USD745 million) for this scheme.
	Green Hydrogen Mission ¹¹	The total outlay for this mission is INR19,744 crore (USD2.3 billion) with a target to produce 5 MMT of green hydrogen annually. The total outlay includes INR17,490 crore (USD2 billion) for the Strategic Interventions for Green Hydrogen Transition (SIGHT programme) under which two separate financial incentives are provided in several tranches.
	Solar Park scheme ¹²	Gol offers a financial outlay of up to INR25,00,000 (USD29,800) per solar park.
	Galvanising Organic Bio-Agro Resources Dhan (GOBARdhan) ¹³	Gol aims to establish 500 new ‘waste to wealth’ plants, including 200 Compressed Biogas (CBG) plants and 300 cluster-based plants with an investment of INR10,000 crore (USD1.2 billion).
	Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM KUSUM) ¹⁴	The scheme aims to promote grid-connected solar power plants, solar-powered agricultural pumps and the solarisation of existing pumps with a total financial support of INR34,422 crore (USD4.1 billion).
Automotive	PLI scheme ¹⁵	<ul style="list-style-type: none"> Launched in 2021, the five-year scheme received an outlay of USD3.5 billion, starting FY24, to boost India’s manufacturing of EVs The scheme exceeded its USD5 billion goal by attracting USD8 billion in investments This helped in the localisation of auto components for EV and is anticipated to increase domestic manufacturing of batteries.
	PM E-Drive scheme ¹⁶	<ul style="list-style-type: none"> This scheme offers a total budget of USD1.2 billion for a period of two years and would serve as the most important policy for EVs It aims to provide subsidies on the purchase of e2W, e3W, e-buses, e-trucks and e-ambulances.
	The Electric Mobility Promotion Scheme (EMPS 2024) ¹⁷	The five-year scheme received an outlay of USD3.5 billion, starting FY24, to boost India’s manufacturing of EVs. The scheme exceeded its USD5 billion goal by attracting USD8 billion in investments.
	E-Vehicle policy ¹⁸	The policy provides incentives on a minimum investment of USD500 million.
	FAME II scheme ¹⁹	The programme was launched in 2019 to fast-track hybrid and EV adoption with a total disbursement of USD1.3 billion.

8 Renewable Purchase Obligation (RPO), Ministry of Power, accessed in October 2024

9 Production Linked Incentive (PLI) Scheme: National Programme on High Efficiency Solar PV Modules, Ministry of New and Renewable Energy, accessed in October 2024

10 PM Surya Ghar: Muft Bijli Yojana, National Portal of India, accessed in October 2024

11 National Green Hydrogen Mission, Ministry of New and Renewable Energy, accessed in October 2024

12 Development of Solar Parks and Ultra Mega Solar Power Projects, Ministry of New and Renewable Energy, accessed in October 2024

13 Year End Review of GOBARdhan: “Waste to Wealth” initiative, PIB, accessed in October 2024

14 Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM KUSUM), Ministry of New and Renewable Energy, accessed in October 2024

15 The Production Linked Incentive (PLI) Scheme for Automobile and Auto components, Ministry of Heavy Industries, accessed in October 2024

16 PM E-DRIVE Scheme: Driving Towards a Greener Future, PIB, accessed in October 2024

17 The Electric Mobility Promotion scheme (EMPS 2024), Ministry of Heavy Industries, accessed in October 2024

18 Government approves E- Vehicle policy to promote India as a manufacturing destination for EVs, PIB, accessed in October 2024

19 Faster Adoption & Manufacturing of Electric Vehicles in India, Ministry of Heavy Industries, accessed in October 2024

Key sectors	Key government incentives, initiatives and policies	Support, incentives and initiatives offered along with capital outlay
Battery storage	National Framework for Promoting Energy Storage ²⁰	The framework offers incentives for the deployment of Energy Storage Systems (ESS) to reduce greenhouses gases and reducing overall costs, improve grid stability by deploying ESS which provides frequency regulation, voltage support, ramping and other ancillary support services.
	PLI scheme for National Programme on Advanced Chemistry Cell (ACC) Battery Storage ²¹	The National Programme on ACC was approved with a total incentive pay out of INR18,100 crore (USD2.1 billion). The scheme aims to incentivise both domestic and overseas investors to set-up Giga-scale ACC and battery manufacturing facilities with the beneficiary firm ensuring to achieve a domestic value addition.
	Viability Gap Funding (VGF) ²²	Launched in September 2023, Gol approved VGF for the development of Battery Energy Storage System (BESS) with an initial financial outlay of INR9,400 crore (USD1.1 billion), which includes budgetary support of INR3,760 crore (USD449 million).
Data centre	Data Centre Policy 2020 ²³	<ul style="list-style-type: none"> The policy allowed 100 per cent foreign direct investment (FDI) and offered infrastructure status to data centre sector Incentives offered on domestic IT hardware including servers, storage, network devices and non-IT equipment such as mechanical, electrical, plumbing, cooling equipment, among others.
	TRAI's Regulatory Framework for Promoting Data Economy ²⁴	Incentives for infrastructure establishment, a data-sharing and consent-management framework and a separate authorisation for Interconnect Exchanges (IXPs).
Logistics and warehousing	National Logistics Policy (NLP) ²⁵	The policy is aimed at implementing digital upgrades, network optimisations, port automation and eco-friendly measures streamlining integration into global supply chains, cutting operational expenses and boosting profitability by lowering logistics costs.
	Unified Logistics Interface Platform (ULIP) ²⁶	A digital gateway that allows industry players to access logistics-related datasets from various government systems through API-based integration.
	The PM Gati Shakti scheme ²⁷	<ul style="list-style-type: none"> The initiative focuses on integrated development, enhanced connectivity infrastructure and minimal environmental impact to ensure the seamless movement of goods and services and infrastructure enhancement projects such as dedicated freight corridors An amount of INR5,000 crore (USD596 million) was earmarked for the scheme.
	Sagarmala initiative ²⁸	<ul style="list-style-type: none"> The initiative aims to establish 35 multi-modal logistics parks (MMLPs) by integrating various transportation modes that offer a range of benefits including reduced costs and improved inventory management The initiative holds 839 projects with an investment of INR5.8 lakh crore till 2035.

²⁰ National Framework for Promoting Energy Storage, Ministry of New and Renewable Energy, accessed in October 2024

²¹ PLI Scheme for National Programme on Advanced Chemistry Cell (ACC) Battery Storage, Ministry of Heavy Industries, accessed in October 2024

²² Cabinet approves Viability Gap Funding (VGF) scheme for implementation of Offshore Wind Energy Projects, PIB, accessed in October 2024

²³ India to be a cloud computing and data centre hub, PIB, accessed in October 2024

²⁴ Regulatory Framework for Promoting Data Economy, TRAI, accessed in October 2024

²⁵ India marks one year of launch of National Logistics Policy on 17th September 2023, PIB, accessed in October 2024

²⁶ Unified Logistics Interface Platform (ULIP) receives tremendous response as 13 organisations sign Non-Disclosure Agreement (NDA) to access data on ULIP, PIB, accessed in October 2024

²⁷ PM Gati Shakti: Transforming India's Infrastructure and Connectivity, PIB, accessed in October 2024

²⁸ Projects Under Sagarmala, Ministry of Ports, Shipping and Waterways, accessed in October 2024

Key sectors	Key government incentives, initiatives and policies	Support, incentives and initiatives offered along with capital outlay
Space	Indian Space Policy 2023 ²⁹	The policy is crafted as a comprehensive and adaptable framework to enact the reform vision approved by the Cabinet.
	Indian National Space Promotion and Authorisation Centre (IN-SPACE) ³⁰	A regulatory body established by GoI to facilitate private sector participation in space activities.
	Satellite Communication Policy ³¹	A policy formulated to streamline the licensing process, encourage investment in space-based communication and expand access to remote areas to support national objectives of digital inclusion.
	NewSpace India Limited (NSIL) ³²	NSIL has declared a comprehensive investment of USD1.2 billion over the next five years (2024–2028) to enhance industry participation and commercial operations within the sector.
	Venture Capital Fund for the space sector ³³	The government approved the establishment of a INR1,000 crore (USD119 million) Venture Capital Fund for the space sector under IN-SPACE.
Railways	Amrit Bharat Station Scheme ³⁴	The Amrit Bharat Station Scheme is a government incentive aimed at transforming 1,275 railway stations across India. Out of this, the government has laid the foundation of 508 Amrit Bharat stations across 27 states with a capital of INR24,470 crore (USD3 billion).
	Public-Private Partnership (PPP) initiative ³⁵	The initiative facilitates private sector participation in railway activities.
	Automobile Freight Train Operator Scheme (AFTO) ³⁶	<ul style="list-style-type: none"> The scheme incentivises private investment in special wagons for automobile transport, fostering the development of automobile hubs. The scheme also offers benefits, such as market-driven pricing and demurrage exemptions.
	PM Gati Shakti Multi Modal Cargo ³⁷	The initiative aims to establish 100 Gati Shakti Multi Modal Cargo Terminals (GCTs) by the end of the financial year 2024–2025.

Please note that this is an indicative list of policies, incentives and support offered by the central government.

²⁹ Indian Space Policy 2023, ISRO, accessed in October 2024

³⁰ About, Indian National Space Promotion and Authorisation Centre (IN-SPACE), accessed in October 2024

³¹ Satellite Communications Norms, Guidelines and Procedures, ISRO, accessed in October 2024

³² Space, Invest India, accessed in October 2024

³³ Empowering India's Space Economy: Rs. 1,000 Crore Venture Capital Fund Initiative for Innovation and Growth, PIB, accessed in October 2024

³⁴ PM lays foundation stone, inaugurates and dedicates to the nation more than 2000 railway Infrastructure projects worth around Rs 41,000 crores, PIB, accessed in October 2024

³⁵ PPP Initiatives in Indian Railway to boost Infrastructure, PIB, accessed in October 2024

³⁶ Railways' Policy on Automobile Freight Train Operator Scheme, PIB, accessed in October 2024

³⁷ PM Gati Shakti Multi Modal Cargo, Government of India, accessed in October 2024

1.1 Electronics system design and manufacturing (ESDM)

India is pioneering transformative changes across the global ESDM value chain through a series of strategic initiatives implemented by the government

India witnessed a significant increase in the demand for electronic products, largely attributed to its status as the second-largest mobile phone manufacturer, proliferation of smartphone usage and a rapid increase in internet penetration across the country. Govt's high

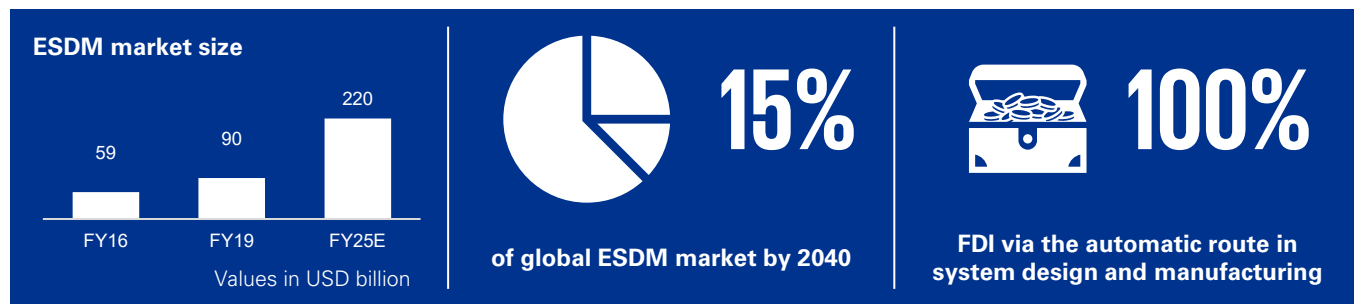
emphasis on electronics hardware manufacturing is evident through initiatives such as Make in India, Digital India and Start-up India, which have led to substantial growth in the production outputs.

India is observing a high demand for electronics products, leading to a significant increase in mobile phone production, with a production value of USD49.2 billion in FY24.³⁸

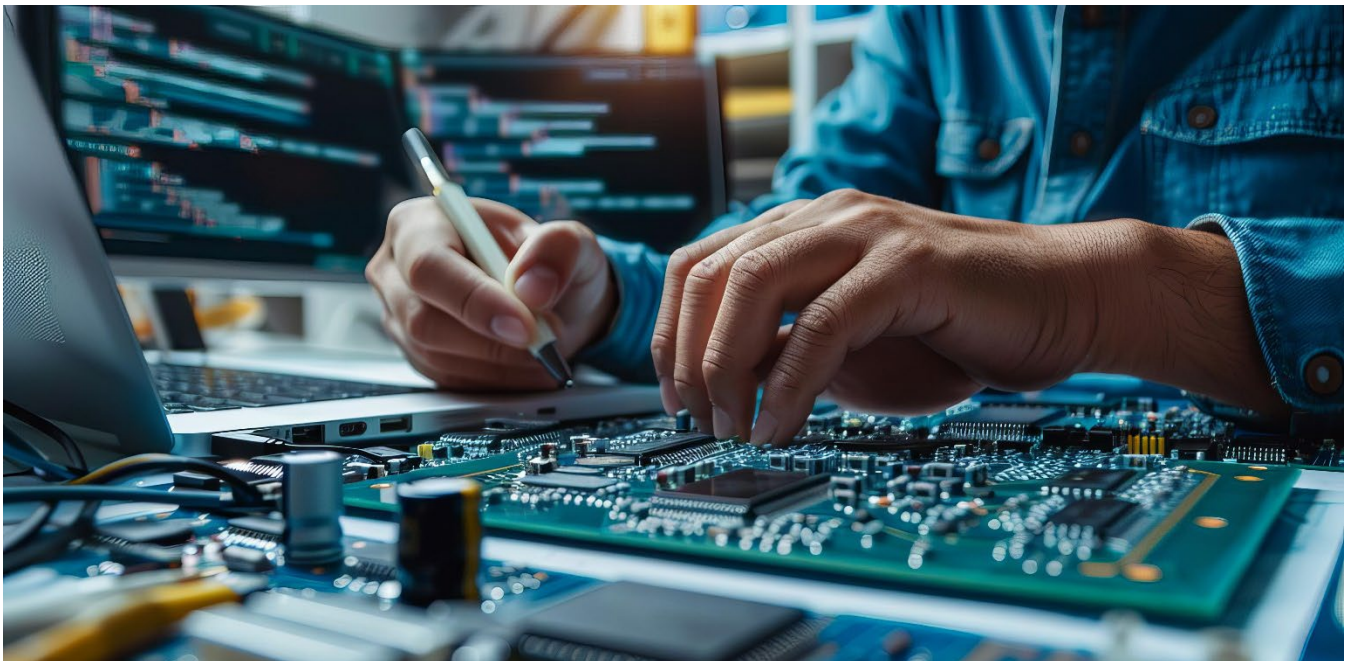
The country witnessed nearly a 3x growth in electronics exports worth USD29.1 billion in FY24 compared to exports of USD8.4 billion in FY19, primarily driven by growing smartphone shipments.³⁹

Mobile phone exports comprised 54 per cent of the total electronics exports as manufacturers benefitted from the PLI scheme which has provided an impetus to electronics manufacturing in India.⁴⁰

India's ESDM landscape: A key contributor to India's export potential



Source: IBEF, Karnataka Digital Economy Mission



³⁸ Smartphones become India's fourth largest export item with 42% growth, IBEF, accessed in October 2024

³⁹ India's electronics exports increase 23.6% to US\$ 29.12 billion in FY24, IBEF, accessed in October 2024

⁴⁰ PLI Scheme to herald a new era in mobile phone and electronic components manufacturing, PIB, accessed in October 2024

1.1.1 Central government-led key incentives, policies and initiatives to enable the sector

National Policy on Electronics 2019 (NPE): Implemented in February 2019, this aims to boost exports and develop critical components, such as chipsets, to **achieve a turnover of USD400 billion by 2025** and stimulate domestic production and exports throughout the ESDM value chain to foster a competitive global industry environment.⁴¹

Phased Manufacturing Programme (PMP): The ESDM sector is vital for EV manufacturing due to its role in producing essential electronics and components for battery management and vehicle control systems. In February 2022, the Ministry of Heavy Industries introduced PMP **to boost the local production of EVs**, including their assemblies, sub-assemblies and various components, outlining a progressive duty structure designed to increase domestic manufacturing.⁴²

Production Linked Incentives (PLI): The scheme, introduced in 2021, offers incentives ranging from 4–6 per cent on incremental sales of domestically manufactured goods, **targeting up to USD5 billion in incentives over five years**, to stimulate mobile phone manufacturing and specific electronic components production. Until June 2024, 32 companies have invested **a total of INR8,282 crore (USD1 billion)** under the **PLI scheme for large-scale electronics manufacturing, including seven greenfield projects and 25 brownfield expansions**. Greenfield investments contributed INR3,136 crore (USD374 million) to the total investment, while brownfield companies accounted for INR5,146 crore (USD614 million).⁴³

Quantum computing advancement and focus on R&D: The establishment of a quantum computing applications lab by the Ministry of Electronics and Information Technology (MeitY), in collaboration with a cloud service provider, aims to boost R&D and innovation in sectors such as

manufacturing and healthcare by offering quantum computing as a service to a wide range of stakeholders.⁴⁴

- The Digital India FutureLABS initiative targets the ESDM sector, emphasising quantum computing, artificial intelligence (AI), big data and other technologies to innovate in computing, communication, automotive, strategic electronics and industrial Internet of Things (IoT).⁴⁵

Capital outlay by the government

The Union Budget 2024–2025 has earmarked INR21,936 crore (USD2.6 billion) for the Ministry of Electronics and Information Technology (MeitY), marking a 52 per cent increase from the revised estimates of FY24 at INR14,421 crore (USD1.7 billion).⁴⁶ This presents an attractive opportunity for global players to invest in the sector's ascent as an emerging force in the allied semiconductor industry.

Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS): Launched in April 2020, the SPECS scheme **offers a 25 per cent financial incentive on capital expenditure** for the manufacturing of electronic components and semiconductor/display fabrication units among others.⁴⁷

Modified Electronics Manufacturing Clusters (EMC 2.0): The EMC 2.0 scheme was launched in April 2020 **to support the creation of world-class infrastructure for global electronics manufacturers**, providing financial assistance for EMC projects and Common Facility Centres (CFCs).⁴⁸

The PLI Scheme for Large-Scale Electronics Manufacturing, SPECS and EMC 2.0 have earmarked an allocation of INR50,000 crore (USD7 billion) to attract stakeholders across the sector value chain to address gaps in domestic electronics production.⁴⁹

41 Electronics System Design & Manufacturing (ESDM) Industry Analysis, India Brand Equity Foundation, accessed in October 2024

42 Phased Manufacturing Programme, Ministry of Electronics and Information Technology, accessed in October 2024

43 Production Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing, Ministry of Electronics and Information Technology, accessed in October 2024

44 India's Ministry of Electronics and Information Technology to establish a Quantum Computing Applications Lab, PIB, accessed in October 2024

45 Digital India futureLABS, PIB, accessed in October 2024

46 India Budget, Ministry of Electronics and Information Technology, accessed in October 2024

47 Design and manufacturing of electronics system, Ministry of Electronics & IT, March 2023, accessed in October 2024

48 Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme, Ministry of Electronics and Information Technology, accessed in October 2024

49 Electronics Manufacturing Schemes, Ministry of Electronics and Information Technology, accessed in October 2024

1.1.2 State-level key policies and incentives

State governments provide policies and incentives tailored for electronics manufacturing, aligning with the Make in India initiative, positioning India as a prime destination for investments

ESDM sector incentives/policies across top Indian states

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The Tamil Nadu Electronics Hardware Manufacturing Policy 2020 aims to increase the state's electronics industry output to USD100 billion and contribute 25 per cent of India's total electronic exports by 2025 while attracting significant FAB investments. To achieve these goals, the Tamil Nadu government offers financial incentives, including **capital subsidies based on investment size and location; stamp duty exemptions; training and interest subventions; power tax exemption and subsidies for intellectual capital, quality certifications and environmental protection infrastructure.**

Source: Invest in Tamil Nadu, Government of Tamil Nadu

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The Karnataka Special Incentives Scheme for the Electronics System Design and Manufacturing (ESDM) Sector 2020–2025 aims to boost the state's ESDM industry with financial incentives that include a **capital investment subsidy of 25 per cent on land and 20 per cent on plant and machinery, full reimbursement of stamp duty, registration, land conversion fees, power tariff reimbursement and electricity duty exemption for five years, along with a production-linked incentive of 1 per cent of annual turnover.** The scheme, which targets new investments and expansions outside Bengaluru Urban and Rural districts, caps the total incentives at 100 per cent of the value of fixed assets created and is open to a range of ESDM activities, in addition to central government incentives but excludes other Karnataka government schemes.

Source: Department of Electronics, Information Technology, Biotechnology, Government of Karnataka

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The Gujarat Electronics Policy 2022–2028 was launched with the aim of transforming the region into a leading ESDM hub, offering significant financial benefits to stimulate the creation of 10 lakh job opportunities in the sector. The policy provides up to **20 per cent capital expenditure assistance for ESDM investments, up to a maximum of INR200 crore (USD23.8 million), alongside 100 per cent reimbursement of stamp duty and registration fees.** It includes exemptions from electricity duty and offers a power tariff subsidy for the first five years to eligible enterprises.

Source: Gujarat State Electronics Mission (GSEM), Government of Gujarat

MH

The Maharashtra State Electronics Policy is dedicated to fostering a competitive environment for electronics production, with a special emphasis on semiconductors. It aims to offer incentives, infrastructure assistance and a favourable setting that encourages semiconductor firms to set up and grow their businesses in the state.

Source: Directorate of Industries, Government of Maharashtra

AP

The Andhra Pradesh Electronics Policy 2021–2024 aims to position the state as a key player in India's electronics sector. The policy outlines financial incentives for the electronics manufacturing industry, **including capital subsidies based on investment and location; stamp duty exemptions; training subsidies; interest subventions; power tax exemptions and support for intellectual capital and environmental protection infrastructure.** These measures are designed to attract significant investments in electronics manufacturing and create employment opportunities within the state.

Source: National Single Window System, Government of India

TG

The Telangana State Electronics Policy offers a robust framework of incentives to bolster the growth of the electronics manufacturing sector, with a notable highlight being the **capital cost reimbursements at 20 per cent, capped at INR2 crore (USD238,000).** In addition to this, the policy extends a comprehensive package of support measures, including a significant **60 per cent land rebate, lease rental assistance for up to 10 years** and a range of financial aids covering **interest subsidy, power subsidy, SGST reimbursements and exemptions from electricity duty.**

Source: Invest Telangana, Government of Telangana

UP

The **Uttar Pradesh Electronics Manufacturing Policy 2020**, updated in 2022, sets a vision to position the state as a hub for electronics manufacturing. The policy offers financial incentives such as **capital subsidies based on the scale of investment and location, additional subsidies for anchor and focus area units, stamp duty exemptions, interest subsidies, electricity duty exemptions and support for skill development**, aiming to foster the growth of the ESDM ecosystem. These incentives are designed to not only boost the economy but also to position Uttar Pradesh as a competitive hub for electronics manufacturing, leveraging its strategic location and skilled workforce.

Source: Invest UP, Government of Uttar Pradesh

WB

The West Bengal government, as part of its focus on the ESDM sector, has highlighted the availability of incentives under the central government's State Data Centre (SDC) scheme for different states.

Source: State Data Centre, Government of West Bengal

RJ

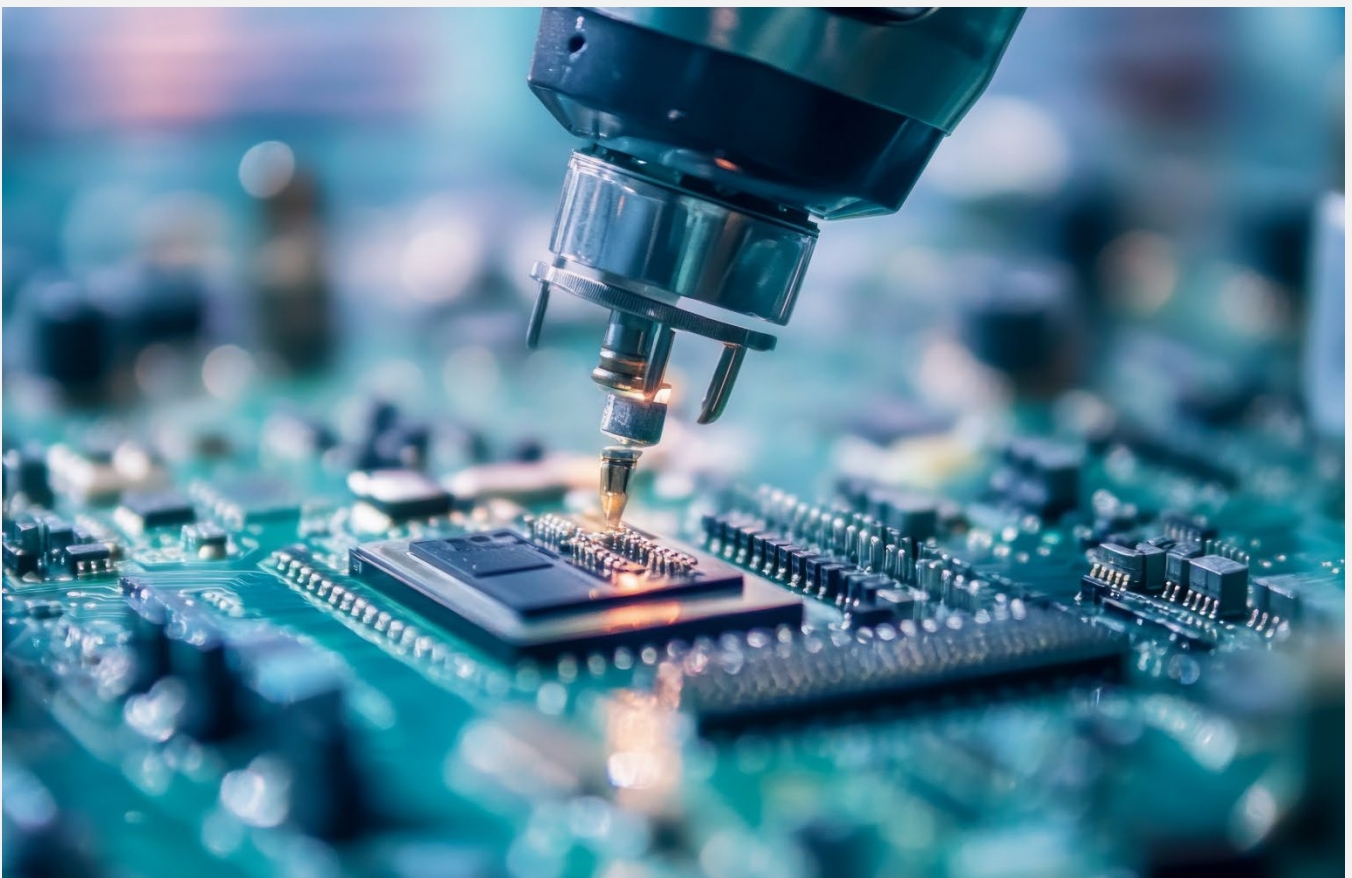
A range of incentives and exemptions are available for the sector under **Rajasthan Investment Promotion Scheme (RIPS) 2024**. This includes a 75 per cent SGST reimbursement for seven years, a capital subsidy of 13-28 per cent of Eligible Fixed Capital Investment over 10 years, or a Turnover Linked Incentive of over 1.2 per cent of net turnover annually for 10 years.

Source: iStart Rajasthan, Government of Rajasthan

MP

Under the **Madhya Pradesh IT, ITeS, ESDM, Investment Promotion Policy 2023**, various incentives are being provided including **25 per cent CAPEX support** for first 5 anchor data centres with a minimum investment of INR500 crore (USD60 million), electricity duty exemption for connections of 33 KV for 3 years, 132 KV for 5 years and 220 KV for 7 years, one-time quality certification reimbursement of 50 per cent up to INR6 lakh (~USD7,175).

Source: Invest MP, Government of Madhya Pradesh



Note - TN: Tamil Nadu; KA: Karnataka; GJ: Gujarat; MH: Maharashtra; AP: Andhra Pradesh; TG: Telangana; UP: Uttar Pradesh; WB: West Bengal; RJ: Rajasthan; MP: Madhya Pradesh. For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

1.1.3 Key trends driving the sector

The electronics manufacturing sector in India is **estimated to grow to USD220 billion** at an **annual rate of 16.6 per cent during 2019–2025**.⁵⁰ In FY24, electronic goods exports reached USD29.1 billion, marking an increase of over 20 per cent from USD23.6 billion in FY23.⁵¹ The ESDM sector is pivotal to the government's ambitious objective to **derive USD1 trillion in economic value from the digital economy by 2025**.⁵² **India's electronics production is projected to reach USD300 billion by 2026**.⁵³

In FY2023–2024, semiconductor and Integrated Circuit (IC) exports amounted to USD4.5 billion, an increase of 18 per cent from USD3.8 billion in 2022–2023.⁵⁴

Local manufacturing growth: Initiatives in local manufacturing of laptops, tablets and smartphones are **projected to yield a production value of USD100 billion and create 500,000 jobs by 2025**, with the mobile phone sector alone expected to generate up to 250,000 jobs in the next 12–16 months.⁵⁵

Electronics export potential across Indian states: The

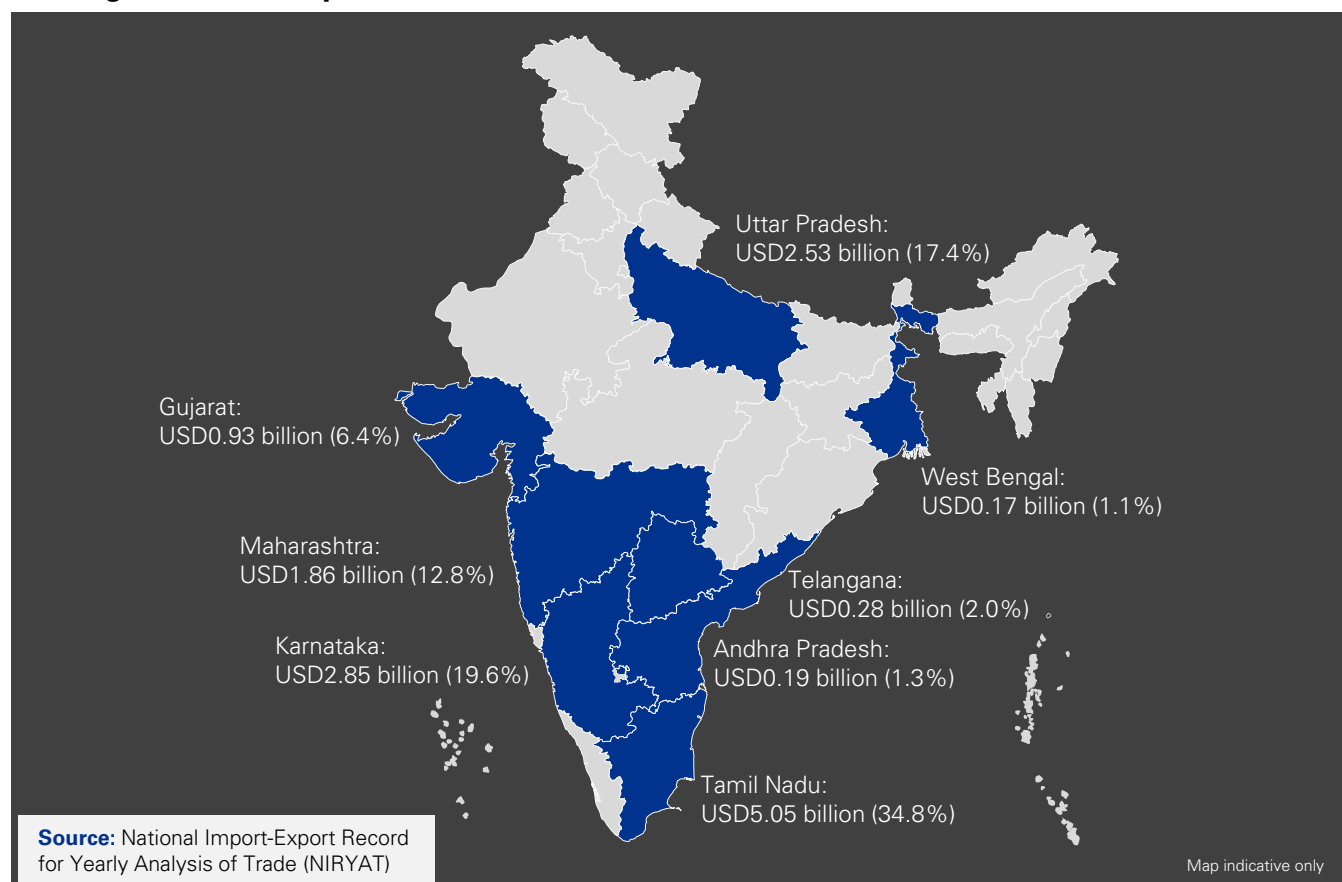
growth in India's electronics exports is fuelled by contributions from across regional clusters.

Tamil Nadu contributed the **highest electronics export of USD5.05 billion**, accounting for 34.8 per cent of national electronics exports, followed by significant contributions from **Karnataka** with an export value of USD2.8 billion, **Uttar Pradesh** (USD2.5 billion), **Maharashtra** (USD1.8 billion) and **Gujarat** (USD0.9 billion) between April 2024 and September 2024.⁵⁶

Unleashing MSME potential in India's electronics manufacturing sector: As India strategises to enhance local value addition in manufacturing, MSMEs are primed to be key contributors. The push towards the adoption of new-age technologies further equips these enterprises to innovate and provide opportunities to expand and export.

- The **export of electronic goods by registered MSMEs in India accounted for a share of 3.6 per cent among all MSME exports**, amounting to **USD4.5 billion in FY2022–2023**.⁵⁷

Leading electronics export contributors



50 Electronics System Design & Manufacturing, IBEF, accessed in October 2024

51 Electronics System Design & Manufacturing (ESDM) Industry in India, IBEF, accessed in October 2024

52 Electronics System Design & Manufacturing, FDI Invest India, accessed in October 2024

53 Annual report 2022-23, Ministry of Electronics and Information Technology, accessed in October 2024

54 Ministry of Commerce and Industry, (HSN codes: 8486, 8541, 8542, 8523, 8525, 8526, 8527, 950450, 8529, 8528, 851010, 8516, 85044030, 910212, 8470, 8473, 85176230, 85176940, 85176950, 85176960, 851981, 851989, 8521, 8471), accessed in October 2024

55 Manufacturing Sector in India, IBEF, accessed in October 2024

56 Electronics export, National Import-Export Record for Yearly Analysis of Trade (NIRYAT), accessed in October 2024

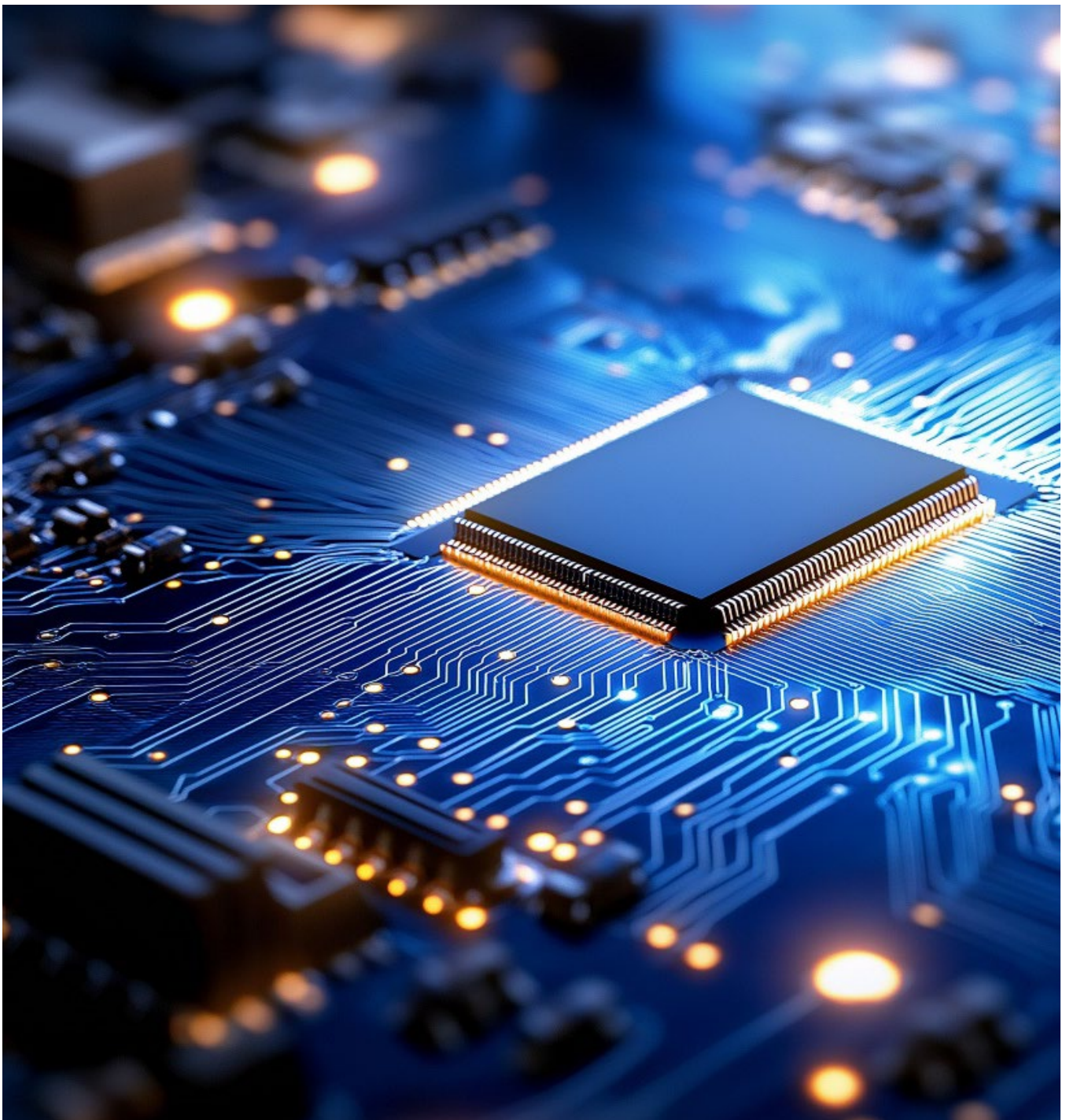
57 Merchandise EXIM Status Report of India's MSME Sector, Government of India, accessed in October 2024

1.1.4 Way forward

India's ESDM sector, driven by robust investments and governmental support, is poised for significant growth. The sector identifies the current limited availability of advanced fabrication facilities as a prime opportunity for investment, actively seeking global partnerships and additional funding to transform these

areas into hubs of innovation.

The future of India's ESDM sector is promising, with a focus on international collaboration, skill enhancement and infrastructure development within a facilitative business environment.



1.2 Semiconductor

Steering towards self-reliance with a pipeline of investments positioning India as an emerging global semiconductor hub

India's semiconductor sector is emerging as an important contributor to the global semiconductor industry, proving to be pivotal to the booming digital economy worldwide. Gol's goal of transforming India

into a leading centre for electronics production and semiconductor fabrication aligns with Atmanirbhar Bharat, Gol's initiative to promote manufacturing in India and enable self-sufficiency across sectors.

The demand for semiconductors is rapidly increasing due to the proliferation of smartphones, smart devices, the rapid digitalisation of the economy driven by Gol initiatives and the rise in adoption of EVs.⁵⁸

India has emerged as an attractive destination for semiconductor manufacturing and R&D players owing to the availability of skilled labour and low operating and people costs.

With Gol reviewing proposals worth USD21 billion from domestic and global players, the recent focus on chip manufacturing reflects the evolution of the semiconductor sector in India from assembly to design and R&D.⁵⁹

India's semiconductor landscape: An emerging centre for fabrication



of global semiconductor design engineers



FDI via the automatic route in electronics manufacturing

Source: Semiconductor and Display Manufacturing – Invest India, Press Information Bureau



⁵⁸ India's Emerging Prominence as a Semiconductor Superpower, Invest India, accessed in October 2024

⁵⁹ India's chip strategy makes progress with US\$ 21 billion in proposals, IBEF, accessed in October 2024

1.2.1 Central government-led key incentives, policies and initiatives to enable the sector

Production Linked Incentive: Implemented in December 2021, the PLI scheme aims to make India a hub for electronics and semiconductor manufacturing by providing financial **assistance of up to 50 per cent of the project cost** for boosting large-scale investments. Additionally, it allocates **USD10 billion in incentives** to attract investments in semiconductor fabrication to promote domestic production.⁶⁰

The Semicon India Future Design: Launched in 2021, the Design Linked Incentive (DLI) scheme provides financial incentives and design infrastructure support for the deployment of semiconductor design capabilities, offering **up to 50 per cent of eligible expenditure with a cap of USD1.8 million per application** and a sales turnover-based **incentive of 4–6 per cent over five years**.⁶¹

The Indian government has sanctioned an investment of **USD15.2 billion** to launch the country's first **advanced semiconductor fabrication plant** and **two packaging and testing facilities**.⁶² The **Semiconductor Mission** aims to transform India into a hub for electronics and semiconductor manufacturing through **an outlay of USD10 billion, encouraging the domestic manufacturing of chips**.⁶³

To strategically enhance its position in the global tech landscape, **the Indian government has set a robust target to expand its electronics sector to a USD500 billion**

valuation, coupled with the creation of six million jobs by 2030.⁶⁴ This ambition underscores a pivotal shift towards 'Silicon Diplomacy', with an emphasis on complete localisation of electronic and semiconductor manufacturing.

The Union Budget 2024–2025 proposed the removal of customs duty on oxygen-free copper for resistor production and the exemption of certain parts for connector manufacturing, aiming to enhance value addition in the domestic electronics sector.⁶⁵

Capital outlay by the government

India Semiconductor Mission (ISM): ISM, established under the Digital India Corporation, aims to enhance the semiconductor and display manufacturing ecosystem, showcasing the government's policy support to drive investment opportunities in the sector. A **financial incentive package of USD9 billion was announced by GoI** to promote the establishment of **semiconductor and fabrication plants**.⁶⁶

Modified Electronics Manufacturing Clusters scheme (EMC 2.0): EMC 2.0 aims to strengthen the electronics manufacturing ecosystem by providing **financial outlay of up to 50 per cent for EMC projects and 75 per cent for Common Facility Centres (CFCs)**, promoting infrastructure development and reducing production costs.⁶⁷

A regional infrastructure development body received a financial support of INR350 crore for an electronics manufacturing and R&D project with a total cost of INR748 crore.⁶⁸



60 India Semiconductor Mission, Ministry of Electronics & IT, December 2022, accessed in October 2024

61 Government of India taking steps to encourage domestic manufacturing of semiconductors & promote country's digital transformation and self-reliance, PIB, accessed in October 2024

62 Cabinet clears three semiconductor plants, IBEF, accessed in October 2024

63 Semiconductor sector, India's Next 'Big Push' Towards Semiconductor Industry, Invest India, April 2023, accessed in October 2024

64 India targets US\$ 500 billion electronics sector, right time to be here: Prime Minister Mr. Narendra Modi, IBEF, accessed in October 2024

65 India's Union Budget 2024 Revisions to Custom Duty Rates, Government of India, accessed in October 2024

66 About Semicon India Programme, India Semiconductor Mission, accessed in October 2024

67 Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme, Ministry of Electronics and Information Technology, accessed in October 2024

68 Details of EMC applications approved under EMC 2.0, Ministry of Electronics and Information Technology, accessed in October 2024

1.2.2 State-level key policies and incentives in the sector

State-level policies and incentives aim to establish India as a self-reliant semiconductor hub, aligning with the Make in India initiative and inviting significant investment and technological advancements to enhance its global industry standing

Semiconductor sector incentives/policies across top Indian states

TN

The **Tamil Nadu Semiconductor and Advanced Electronics Policy 2024** offers up to **50 per cent of CAPEX assistance**. Should a semiconductor project chosen by the centre establish its manufacturing operations in Tamil Nadu, it will additionally qualify for further incentives, including personnel training, stamp duty, land and electricity concessions.

Source: Investing in Tamil Nadu, Government of Tamil Nadu

KA

Karnataka Electronics System Design & Manufacturing Policy 2017–2022 outlines a range of incentives aimed at supporting start-ups in the semiconductor sector. These incentives include exemptions from electricity duty, a **capital subsidy of up to INR10 crore (USD1.2 million), interest subsidy and various land-related benefits**, all designed to foster growth and innovation in Karnataka's semiconductor industry.

Source: Department of Electronics, Information Technology, Biotechnology, Government of Karnataka

GJ

The Gujarat Semiconductor Policy 2022–2027, aligned with the India Semiconductor Mission (ISM), is designed to attract semiconductor businesses and research activities to Gujarat through significant financial support. This includes 40 per cent capital assistance on qualifying expenditures over five years post-investment, up to 75 per cent subsidy on land for fabrication projects in Dholera, full reimbursement of stamp duty for land transactions and subsidies for utilities like water and power tariffs for a decade post-commercial operations. It provides incentives for common infrastructure development essential for semiconductor projects, with potential adjustments in capital assistance based on construction costs.

Source: Gujarat State Electronics Mission (GSEM), Government of Gujarat

MH

The **Maharashtra State Electronics Policy** is dedicated to fostering a competitive environment for electronics production, with a special emphasis on semiconductors. It aims to offer incentives, infrastructure assistance and a favourable setting that encourages semiconductor firms to set up and grow their businesses in the state.

Source: Directorate of Industries, Government of Maharashtra

AP

As a part of the **Andhra Pradesh Electronics Policy 2021–2024**, the state government offers incentives for semiconductor and LCD fabrication units and is committed to partnering with major investors, targeting those ready to invest over INR7,500 crore, to establish leading international fabrication hubs. Through a dedicated committee, the state aims to expedite these substantial investment ventures, guaranteeing swift access to both the necessary infrastructure and a skilled workforce to support the development of these high-tech manufacturing facilities.

Source: National Single Window System, Government of India, Government of Andhra Pradesh

TG

The Telangana State Electronics Policy provides a strong incentive structure to enhance the electronics manufacturing sector, **including the semiconductor and chip industries**, featuring 20 per cent capital cost reimbursements. It offers a broad support package with a 60 per cent land rebate, up to 10 years of lease rental assistance and various financial benefits such as interest and power subsidies, SGST reimbursements and electricity duty exemptions.

Source: Invest Telangana, Government of Telangana

UP

The Uttar Pradesh Semiconductor Policy 2024 provides significant financial incentives to the semiconductor industry, such as a **50 per cent additional capital subsidy**, a **5 per cent interest subsidy on investments up to INR200 crore (USD23.8 million)** for seven years and substantial discounts on land, including a **75 per cent rebate on the first 200 acres**. It also offers full exemption from stamp duty, registration fees and electricity duty for 10 years. The policy supports the sector with dual power grid network reimbursements, 50 per cent off on intrastate power charges for 25 years and substantial backing for skill development, research and patent registration, with up to 25 per cent subsidy for R&D centres and funding for establishing Centres of Excellence.

Source: Invest UP, Government of Uttar Pradesh

MP

The Madhya Pradesh IT, ITeS, ESDM, Investment Promotion Policy 2023 offers a range of incentives targeting the **manufacturing sectors of PCBs, semiconductors, chip components, ICs and their parts**. These incentives include a **25 per cent capex support** for the first five anchor data centres with a minimum investment of INR500 crore (USD60 million), electricity duty exemption for connections of 33 KV for three years, 132 KV for five years and 220 KV for seven years, one-time quality certification reimbursement of 50 per cent up to INR6 lakh (USD7,175).

Source: M.P. State Electronics Development Corporation Ltd., Government of Madhya Pradesh

Note - TN: Tamil Nadu; KA: Karnataka; GJ: Gujarat; MH: Maharashtra; AP: Andhra Pradesh; TG: Telangana; UP: Uttar Pradesh; MP: Madhya Pradesh. For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

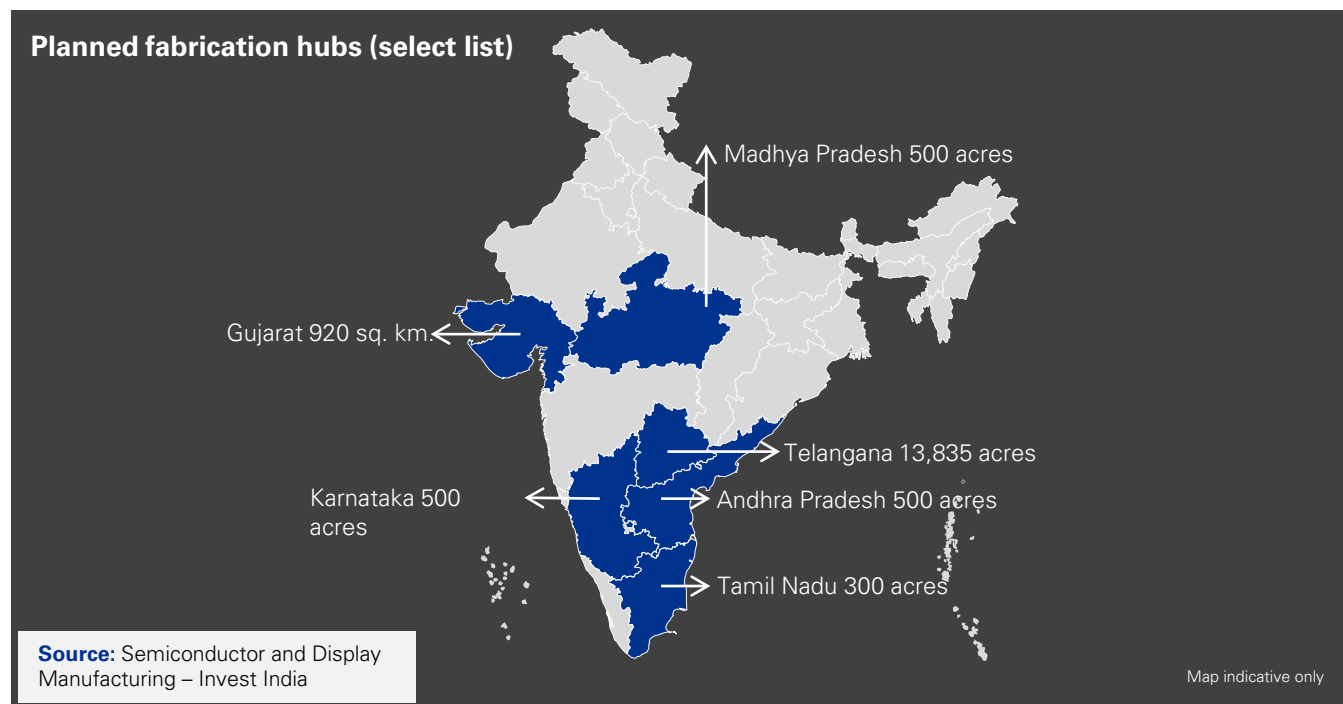
1.2.3 Key trends driving the sector

Gol is dedicated to developing the semiconductor sector towards self-reliance, actively deploying strategies and policies to enhance its growth and increase share in the global market.

- In FY24, **semiconductor and Integrated Circuit (IC) exports** amounted to **USD4.5 billion an increase of 18**

per cent from USD3.8 billion in FY23.⁶⁹

Upcoming fabrication clusters: Investments across the sector's value chain and policy support from the government, aligned with the Atmanirbhar Bharat initiative, have led to the emergence of semiconductor clusters to host potential fabrication hubs.



Supply chain diversification: India and the US have agreed to collaborate on establishing a semiconductor fabrication plant in India, supporting the country's manufacturing sector. This initiative will be supported by the ISM and involves a strategic technology partnership between India and the US Space Force. India's strategic location in Asia highlights its potential in technology innovation, which has led to Gol positioning India as an alternative centre in the tech sector.⁷⁰

sector: MSME sector companies have significantly contributed to advancing India's semiconductor sector. The sector has benefitted from a government initiative supporting seven MSMEs/start-ups with financial incentives and design infrastructure.

The **export of electronic goods by registered MSMEs in India accounted for a share of 3.6 per cent of all MSME exports**, amounting to **USD4.5 billion in FY2022–2023**.⁷¹

MSMEs fuel advancements in India's semiconductor

1.2.4 Way forward

India is at the forefront of a semiconductor revolution, propelled by advancements in innovative architecture, AI, 3D integration and technology synergy. Foreign investments could be further encouraged by maintaining policies that allow 100 per cent FDI in semiconductor manufacturing, providing clear guidelines and fast-tracking approval processes.

Aligned with the Make in India vision, the nation is striving for self-reliance in semiconductor

manufacturing by making significant investments and prioritising chip production.

This pursuit strengthens India's position as a self-sufficient semiconductor hub and opens avenues for FDI to shape the industry's future. With a strategic focus on bridging investment gaps and leveraging technological advancements, India is poised to make a meaningful contribution to the global semiconductor landscape.

⁶⁹ Ministry of Commerce and Industry, (HSN codes: 8486, 8541, 8542, 8523, 8525, 8526, 8527, 950450, 8529, 8528, 851010, 8516, 85044030, 910212, 8470, 8473, 85176230, 85176940, 85176950, 85176960, 851981, 851989, 8521, 8471); all accessed in August 2024, accessed in October 2024

⁷⁰ Joint Fact Sheet: The United States and India Continue to Expand Comprehensive and Global Strategic Partnership, PIB, accessed in October 2024

⁷¹ Merchandise EXIM Status Report of India's MSME Sector, Government of India, accessed in October 2024

1.3 Renewable energy

To achieve net-zero status, India is transitioning towards non-fossil-based fuels along with increasing domestic manufacturing

India is undergoing a transformation in its energy landscape, transitioning from traditional coal and fossil-based energy sources to renewable energy to achieve its net-zero targets by 2070. India's geographic

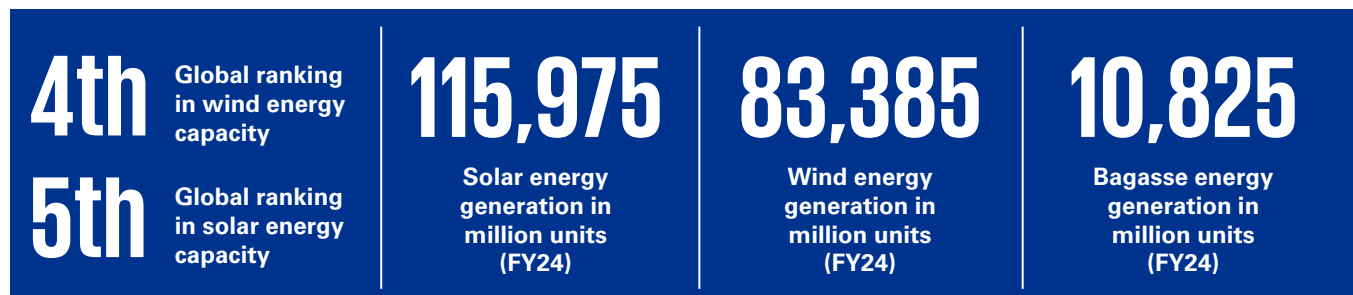
advantages, including around 250–300 sunny days⁷² annually, a 7,500-km-long coastline⁷³ and abundant biomass resources, make it an ideal destination for solar, wind and biogas energy generation.

India has targeted to attain net-zero status by 2070 and the share of renewable energy in electricity generation is expected to reach 50–70 per cent by 2040 to enable this transition.⁷⁴

Facilitative government policies increased domestic solar module production from 8 GW in 2021 to over 60 GW annually by the end of 2023, reducing imports and promoting private sector manufacturing.⁷⁵

Currently, India relies on importing solar cells. The government is making constant efforts to indigenise the value chain through PLI schemes to set up fully integrated solar PV manufacturing plants.⁷⁶

India's renewable energy landscape: Paving the way for sustainable future



Source: Invest India, Renewable Energy Report March 2024, Central Electricity Authority, Ministry of Power



⁷² India's Rising Solar Sector, Invest India, accessed in October 2024

⁷³ Maritime India Vision, Ministry of Ports, Shipping and Waterways, accessed in October 2024

⁷⁴ India's Renewable Energy Growth: Solar Power & More, IBEF, accessed in October 2024

⁷⁵ India's solar PV module manufacturing capacity increases from 2.3 GW to 67 GW under 10 years of Make In India, PIB, accessed in October 2024

⁷⁶ Government implementing PLI scheme for boosting domestic production of Solar Modules: Union Power & NRE Minister, PIB, accessed in October 2024

1.3.1 Central government-led key incentives, policies and initiatives to enable the sector

The Indian government has been at the forefront of driving growth in the renewable energy sector through various initiatives and policies. These efforts are aimed to create a conducive environment for investments.

Renewable Purchase Obligations (RPO): In October 2023, the central government announced year-wise Renewable Purchase Obligation (RPO) targets up to 2030, starting from 2024–2025, under the recently acquired statutory powers of the Energy Conservation (EC) Act 2001. These new RPOs will be a key intervention for achieving national commitments of 500 GW by 2030 and will also ensure higher energy security.

PLI scheme: In November 2022, **the Ministry of New and Renewable Energy allotted INR19,500 crore (USD2.4 billion)**, with a commitment towards increasing domestic solar manufacturing capability in Tranche-II. It is expected to **develop 65 GW** of annual manufacturing capacity.⁷⁷

PM Surya Ghar: Muft Bijli Yojana: This scheme was launched in February 2024 with an aim to provide free electricity up to 300 units to 10 million beneficiaries through rooftop solar installations which would be incentivised. The scheme is expected to involve an **investment of INR75,000 crore (~USD9 billion) through subsidies of up to 60 per cent on solar unit cost.**⁷⁸ **Gol allocated a sum of INR6,250 crore (~USD745 million)** for this scheme in Union Budget 2024–2025.⁷⁹

Capital outlay by the government

Green Hydrogen Mission: This scheme was introduced in January 2023 to develop India into a global hub for producing, using and exporting green hydrogen. The total **outlay for this mission is INR19,744 crore for Strategic**

Interventions for Green Hydrogen Transition (SIGHT programme) under which two separate financial incentives are provided in several tranches.⁸⁰ **One incentive is for manufacturing electrolyzers and another for the production of green hydrogen.** Apart from this, INR1,466 crore is allotted for pilot projects, INR400 crore for R&D and INR388 crore for other mission components.⁸⁰ Gol received bids from 23 companies⁸¹, as per Envelope-1, for setting up electrolyser manufacturing capacity in India under the SIGHT scheme Tranche 2. In the **Union Budget 2024-25**, Gol allotted INR600 crore for National Green Hydrogen Mission.⁸²

Solar Park scheme: With an initial launch back in December 2014, the Solar Park scheme was introduced to promote clean and sustainable energy. In November 2023, **50 solar parks were approved, with the total capacity of 37,490 MW out of which 10,401 MW has been commissioned.**⁸³ Gol offers a **financial outlay of up to INR25,00,000 (USD29,800) per solar park.**⁸⁴

Galvanising Organic Bio-Agro Resources Dhan (GOBARdhan): Launched in 2018, the scheme focused on keeping villages clean, increase the income of rural households by generating energy and organic manure from cattle waste. Under the scheme, Gol aims to establish 500 new 'waste to wealth' **plants including 200 Compressed Biogas (CBG) plants and 300 cluster-based plants with an investment of INR10,000 crore (~USD1.2 billion).**⁸⁵

Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM KUSUM): The scheme aims to promote grid-connected solar power plants, solar-powered agricultural pumps and the solarisation of existing pumps with a **total financial support of INR34,422 crore (USD4.1 billion).**⁸⁶

77 Renewable Energy, Invest India, accessed in October 2024

78 Cabinet approves PM-Surya Ghar: Muft Bijli Yojana for installing rooftop solar in One Crore households, PIB, accessed in October 2024

79 India Budget, Ministry of New and Renewable Energy, accessed in October 2024

80 National Green Hydrogen Mission, MNRE, January 2023, accessed in October 2024

81 RfS for Selection of Electrolyser Manufacturers (EM) for Setting up Manufacturing Capacities for Electrolysers in India under Strategic Interventions for Green Hydrogen Transition (SIGHT) Scheme (Tranche-II), MNRE, accessed in October 2024

82 Hydrogen Energy in India, MNRE, accessed in October 2024

83 50 Solar Parks of nearly 37.5 GW sanctioned since 2014; capacity of 10.2 GW established, PIB, accessed in October 2024

84 Development of Solar Parks and Ultra Mega Solar Power Projects, Ministry of New And Renewable Energy, accessed in October 2024

85 Summary of The Union Budget 2023-24, PIB, accessed in October 2024

86 Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan (PM KUSUM), MNRE, accessed in October 2024

1.3.2 State-level key policies and incentives

State-level policies and incentives have been crucial in fostering the sector's promising growth, attracting large-scale investments and significantly increasing renewable energy capacity

Renewable sector incentives/policies across top Indian states

KA

Karnataka Renewable Energy Policy 2022–2027 aims to facilitate the development of 10 GW of additional renewable energy projects with or without energy storage systems, including up to 1 GW of rooftop solar PV projects.

Source: Karnataka Renewable Energy Development Limited, Government of Karnataka

GJ

Under its **Renewable Energy Policy 2023**, the government offers a green tariff determined by Gujarat Electricity Regulatory Commission (GERC) for the renewable power supplied by DISCOMs when requested by the customer. Additionally, as a part of the policy, the state will provide government land or the land owned by the state nodal agency to renewable energy developers.

Source: Gujarat Energy Development Agency, Government of Gujarat

MH

Maharashtra Green Hydrogen Policy 2023 offers 100 per cent exemption in electricity duty for electricity generated through renewable energy projects for a period of 10 years, 50 per cent discount on transmission charges for power extracted through renewable energy projects for a period of 10 years, among others.

Source: Maharashtra Industry, Trade And Investment Facilitation (MAITRI), Government of Maharashtra

AP

Under **Andhra Pradesh Green Hydrogen and Green Ammonia Policy 2023** the state government offer several incentives including full reimbursement of net SGST revenue for the sale of green hydrogen/green ammonia within the state for a duration of five years starting from the commercial operation date and 100 per cent exemption on electricity duty for the power consumed to produce green hydrogen or green ammonia, among others.

Source: Government of Andhra Pradesh

UP

Uttar Pradesh Solar Energy Policy 2022 provides incentives to promote the adoption of rooftop solar. For the residential sector, the state government provides subsidy of INR15,000 (USD179) per kW with a capping of INR30,000 (USD358) per consumer. The state is establishing a green energy corridor in the Bundelkhand region to support the evacuation of solar projects, initially designed for 4,000 MW capacity, with potential for future enhancement based on private investment.

Source: Department of Additional Sources of Energy, Government of Uttar Pradesh, Uttar Pradesh New & Renewable Energy Development Agency

WB

The **West Bengal Green Hydrogen Policy 2023** aims to advance the sector offering 100 per cent exemptions on stamp duty and land conversion, a full waiver of electricity duty charges and 30 days of renewable energy power banking as incentives.

Source: Department of Power, Government Of West Bengal

RJ

Under its **Rajasthan Green Hydrogen Policy**, the government offers incentives including 50 per cent exemption on transmission and distribution charges for 10 years.

Source: Rising Rajasthan, Government of Rajasthan

MP

Under **Madhya Pradesh Renewable Energy Policy 2022**, the government offers various incentives, including 50 per cent rebate on government land purchased by the developers, 50 per cent reimbursement on stamp duty on procurement of private land and renewable projects to be 100 per cent exempted from paying electricity duty for a period of 10 years, among others.

Source: New and Renewable Energy Department, Government of Madhya Pradesh

Note - KA: Karnataka; GJ: Gujarat; MH: Maharashtra; AP: Andhra Pradesh; UP: Uttar Pradesh; WB: West Bengal; RJ: Rajasthan; MP: Madhya Pradesh. For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

1.3.3 Key trends driving the sector

India's renewable energy sector's recent growth is driven by favourable geography, increasing government support and growing investor interest.

India ranks fourth globally for total renewable energy installed capacity. As of September 2024, the **renewable energy capacity has increased to 209.6 GW with a total growth of 396 per cent⁸⁷ (including large hydro and nuclear) in past eight to nine years and accounts for ~46 per cent of the total 452.6 GW⁸⁸ capacity** of the country currently.

- India aims to achieve 500 GW of non-fossil fuel energy and reduce emissions by 1 billion tonnes by 2030.⁸⁹

It is anticipated that India will add 30–35 GW of renewable energy capacity by FY25.⁹⁰ The country is experiencing a surge in investments in renewable energy projects reaching ~USD16.5 billion in 2024.⁹¹ Some of the major projects in the pipeline for renewable energy include investments from the private sector and state-owned firms.

Opportunity in solar, wind, bio energy and green hydrogen segments: The solar and wind energy segments dominate the overall renewable market, contributing 90.7 GW and 47.3 GW, respectively, to the total installed capacity of 201.7 GW along with current installed capacity of 11.3 GW for biopower.⁹² During FY2023–2024, the total exports for renewable energy components stood at USD2.2 billion.⁹³

Solar energy: India offers a lucrative market for solar energy generation.

- The government aims to achieve the target of 270 GW out of a total 500 GW of solar photovoltaic (PV) capacity by 2030, **underlining the huge investment potential in Indian solar energy segment.⁹⁴** The expanding solar power market in India is driven by multiple factors which include one of cheapest costs of electricity production from solar and government's support to install rooftop solar and investments in large-scale battery storage.

Wind energy: In 2024, the **Union Cabinet approved VGF scheme for offshore wind energy projects with a total outlay of INR7,453 crore** and granted **INR600 crore for**

upgrading two ports. This initiative will streamline the logistics around offshore wind projects and **enable access to wind energy within India's exclusive economic zone.⁹⁵**

- **In the Union Budget 2024-25, GoI allocated INR800 crore (~USD96 million) for wind energy⁹⁶**
- **Investments of up to USD24 billion are expected by 2028** to add 25 GW of wind energy capacity in India thus providing opportunities to attract global investors.⁹⁷

Bio energy: India's abundant biomass resources, such as cattle dung, biomass, agricultural waste and waste from urban and industrial areas, present a substantial opportunity for bioenergy production.

- By **FY2050**, the bio-energy market in India is anticipated to **expand to ~USD125 billion**, supported by government policies and substantial investments from global energy firms⁹⁸

Green hydrogen: Green hydrogen is produced through electrolysis using electricity generated from renewable sources including solar, wind or from the gasification of biomass.

- India is expected to have a green hydrogen market share of USD8 billion in 2030⁹⁹
- India's focus on green hydrogen could help in replacing grey hydrogen in industries involved in fertiliser production, petroleum refining, steel and shipping, thus helping in reducing carbon footprint and reliance on imported fossil fuels
- To achieve net-zero status by 2070, the government **launched the Green Hydrogen Mission** to increase the production of green hydrogen and avert 50 MMT of CO₂ emissions per annum. The mission is expected to contribute 125 GW of renewable energy to help in achieving the 500 GW target by 2030 set by the government. This could elevate the position of India in production and usage of green hydrogen globally¹⁰⁰
- The mission will also help in **creating a robust supply chain by boosting the local production of electrolyser**, which helps in splitting water into hydrogen and oxygen through electrolysis.

⁸⁷ Renewable energy sector, Invest India, accessed in October 2024

⁸⁸ India Power Capacity, NITI Aayog, May 2024, accessed in October 2024

⁸⁹ India is committed to achieve the Net Zero emissions target by 2070 as announced by PM Modi, Ministry of Science & Technology, accessed in October 2024

⁹⁰ India adds 1.7 GW solar power capacity in July, IBEF, accessed in October 2024

⁹¹ India to experience 83% surge in RE investments next year, Economic Diplomacy Division, December 2023, accessed in October 2024

⁹² India's Renewable Energy Capacity Hits 200 GW Milestone, PIB, October 2024, accessed in October 2024

⁹³ Ministry of Commerce and Industry (HSN codes: 76151012, 85437092, 850231, 84128030, 85414200, 85414300), accessed in October 2024

⁹⁴ Solar Energy capacity has nearly tripled in last 5 years from 21651 MW to 64380 MW, PIB, accessed in October 2024

⁹⁵ Cabinet approves Viability Gap Funding (VGF) scheme for implementation of Offshore Wind Energy Projects, PIB, June 2024, accessed in October 2024

⁹⁶ India Budget, Ministry of New and Renewable Energy, accessed in October 2024

⁹⁷ India set to boost wind energy capacity to 25 GW by 2028, Economic Diplomacy Division, accessed in October 2024

⁹⁸ Government's Support Fuels Transformation of Bioenergy Ecosystem in India: Petroleum Minister Hardeep Singh Puri, Ministry of Petroleum and Natural Gas, October 2024, accessed in October 2024

⁹⁹ India Green Hydrogen Market, NITI Aayog, accessed in October 2024

¹⁰⁰ National Green Hydrogen Mission, Ministry of New And Renewable Energy, accessed in October 2024

Government effort to facilitate the renewable energy sector ecosystem: To attract more FDI, the government liberalised its policies, allowing up to **100 per cent FDI under the automatic route for renewable energy generation and distribution projects.**¹⁰¹

- During April 2000–September 2023, the country received

- FDI of more than USD6 billion in the renewables sector¹⁰²
- Govt has implemented various initiatives to attract foreign and domestic investments including establishing a Project Development Cell, setting up Ultra Mega Renewable Energy Parks and introducing new transmission lines as part of the Green Energy Corridor Scheme.

1.3.4 Way forward

The promising growth of the sector and consistent policy support from the government has set the foundation to drive large-scale investments. **The renewable energy capacity is expected to be enhanced from the current level of 15 GW annually to 50 GW annually along with three times of current investments.**¹⁰³ Opportunities such as large-

scale battery storage, the indigenisation of solar value chain, increasing the potential of offshore wind energy capacity and the rising demand for green hydrogen provide a massive opportunity for global investors and financial institutions to participate in India's renewable energy journey, promising lucrative returns.



¹⁰¹ Renewable Energy in India, Invest India, accessed in October 2024

¹⁰² India's renewable energy sector has received FDI equity investment of \$6.1 billion, PIB, accessed in October 2024

¹⁰³ Government declares plan to add 50 GW of renewable energy capacity annually for next 5 years to achieve the target of 500 GW by 2030, PIB, accessed in October 2024

1.4 Automotive

Paradigm shift towards EV and its related investments making India an epicentre in global automotive industry

India's automotive sector, including key and emerging segments such as EVs and auto components, represents a cornerstone of the country's economic development. **The sector's growth has been fuelled by growing domestic**

demand and the attractiveness for industry giants to set up units to cater to foreign markets facilitated by policies and initiatives adopted by GoI.

Factors such as growing income levels, increasing purchasing power driving growth in discretionary spends, growing credit and the shift towards vehicle customisation are driving the automobile sector in India.

GoI's increasing awareness of a sustainable environment, through measures such as the vehicle scrappage policy, is fostering innovation in the industry, including the adoption of BS-VI and EV vehicles.

India is witnessing a surge in the demand for EVs, which requires rapid growth and global investments in R&D and upgrading charging infrastructure to ensure long-term mobility sector transformation.

India's automotive ecosystem: A key contributor of the nation's economy

USD151  billion
Market size (FY24)

USD1.5  billion
FDI (FY24)

37  million
Employment generated (FY24)

4.7% 
Share in India's exports

Source: Invest India, DPIIT, Ministry of Heavy Industries



Largest producer of three wheelers and tractors



2nd largest manufacturer of two wheelers



3rd largest producer of passenger vehicles



4th largest manufacturer for heavy trucks

Source: Automobile – Invest India



1.4.1 Central government-led key incentives, policies and initiatives to enable the sector

PLI scheme: Launched in 2021, the five-year scheme received an outlay of USD3.5 billion starting FY24 to boost India's manufacturing of EVs. The scheme exceeded its USD5 billion goal by attracting USD8 billion in investments. This helped in the localisation of auto components for EV and is anticipated to increase domestic manufacturing of batteries. As a part of this, 67 applicants are already approved for the component incentive scheme. The PLI scheme for automotive sector offers financial incentives of up to 18 per cent on the sales of advanced automobile products sold to encourage domestic manufacturing of vehicles and auto parts.¹⁰⁴

Capital outlay by the central government

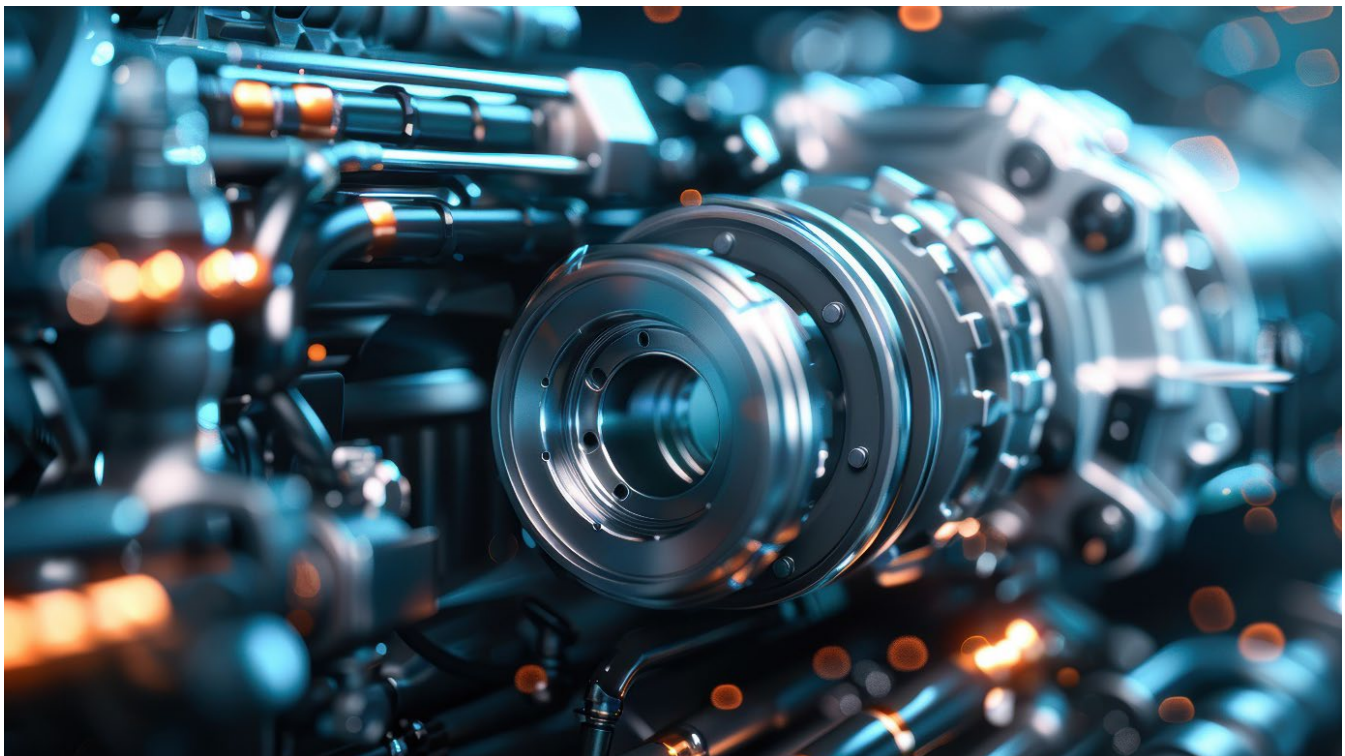
PM E-Drive scheme: This scheme was recently approved by Gol in September 2024 with a total budget of USD1.2 billion for a period of two years and would serve as a key policy for EVs. It aims to provide subsidies on the purchase of e2W, e3W, e-buses, e-trucks and e-ambulances. It will also provide the support to 88,500 charging sites.¹⁰⁵ This scheme replaces the FAME II scheme and through this Gol aims to gain 10 per cent market share for e2W and 15 per cent for

e3W by March 2026.¹⁰⁶ PM E-Drive scheme includes the Phased Manufacturing Programme (PMP) to promote the local manufacturing of EV components. EV manufacturers that procure components locally would receive financial support based on the domestic value addition mandate.¹⁰⁷

The Electric Mobility Promotion scheme (EMPS 2024): EMPS was implemented for a limited period in April 2024 with a budget of ~USD60 million.¹⁰⁸ **The government extended the scheme till September 2024, with an enhanced outlay of ~USD93 million** to accelerate the adoption of e2W, e3W and boost green mobility.¹⁰⁹

E-Vehicle policy: Implemented in March 2024, the policy aims to **attract global brands to India as it provides subsidy on the import duty on electric passenger vehicles.** The policy requires an automobile company to **set up manufacturing unit with a minimum investment of USD497 million and achieve a 50 per cent domestic value addition in the next five years.**¹¹⁰

FAME scheme: FAME II was launched in 2019 with an initial funding of about ~USD1.2 billion to fast-track hybrid and EV adoption.¹¹¹



104 Production Linked Incentive (PLI) Schemes in India, Invest India, accessed in October 2024

105 Cabinet approves PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme with an outlay of Rs.10,900 crore over a period of two years, PIB, accessed in October 2024

106 India's Automobile Industry, IBEF, accessed in October 2024

107 PM E-DRIVE Scheme: Electric Vehicle Sales Soar, PIB, accessed in October 2024

108 Electric Mobility Promotion Scheme- 2024, Ministry of Heavy Industries, March 2024, accessed in October 2024

109 Government extends duration of EMPS 2024 by two months i.e. upto 30th September, 2024 with enhancement of outlay to Rs. 778 crore, Ministry of Heavy Industries, July 2024, accessed in October 2024

110 Government approves E- Vehicle policy to promote India as a manufacturing destination for EVs, Ministry of Commerce & Industry, March 2024, accessed in October 2024

111 Fame II, Ministry of Heavy Industries, accessed in October 2024

1.4.2 State-level key policies and incentives in the sector

State governments within India offer tailored incentives and policies to bolster the automotive sector, aligning with the national initiatives to promote EV adoption, boost R&D, expand domestic manufacturing and enhance technological integration, thereby fostering an environment conducive to investment and growth in this dynamic industry

Automotive sector incentives/policies across top Indian states

TN

The Tamil Nadu government under its EV policy 2023 offers capital subsidy of 15 per cent of investment in eligible fixed assets, 100 per cent reimbursement of gross SGST, turnover subsidy of 2 per cent of the project's annual turnover, 100 per cent exemption on electricity tax for a period of five years on power procured from Tamil Nadu Generation & Distribution Corporation Limited (TANGEDCO). A capital subsidy of 20 per cent is provided for new projects/expansion for EV battery manufacturing.

Source: Investing in Tamil Nadu, Government of Tamil Nadu

KA

Karnataka offers incentives such as up to 100 per cent exemption on stamp duty and land conversion fee and provides investment promotion subsidy.

Source: Invest Karnataka, Government of Karnataka

GJ

Under Gujarat Electric Vehicle Policy 2021, the government offers a subsidy of INR10,000 (~USD119) per kWh for two, three and four wheelers.

Source: Ports & Transport Department, Government of Gujarat

MH

The Maharashtra government under its EV Policy 2021–2025 provides incentives including INR5,000 per kWh (USD60) for all vehicle categories in EVs except two wheelers for which incentives of INR10,000 (USD119) is provided. The government also provides vehicle scrapping incentives of up to INR7,000 (USD84).

Source: Maharashtra State Innovation Society, Government of Maharashtra

AP

Andhra Pradesh government offers up to 15 per cent of Fixed Capital Investment (FCI) and 100 per cent reimbursement of SGST under its Industrial Policy 2023–27. The policy also offers incentives such as 3 per cent per annum interest subsidy, 100 per cent reimbursement of stamp duty land conversion charges, among others.

Source: National Single Window System, Government of India

TG

Telangana government offers various incentives for automotive sector including up to 20 per cent capital subsidy, up to 100 per cent reimbursement of stamp duty and registration fees, up to 100 per cent electricity duty exemption, SGST reimbursement, up to 25 per cent subsidy on power, up to 60 per cent transport subsidy. As per **Telangana Electric Vehicle and Storage Policy 2020–30**, the government provides **manufacturing incentives** including **20 per cent CAPEX subsidy capped at INR30 crore (~USD3.6 million), power tariff discount of 25 per cent up to INR5 crore (USD597,960), electricity duty exemption of 100 per cent for 5 years capped at INR5,00,000 (USD5,979)**, among others.

Source: National Single Window System, Government of India

UP

The Uttar Pradesh EV Policy offers a 100 per cent exemption on registration fees and road tax for EVs for the first five years and introduces purchase subsidies for various EV categories, such as 15 per cent off the ex-factory cost up to specific amounts for different vehicle types, valid for one year from the subsidy notification.

Source: Invest UP, Government of Uttar Pradesh

WB

The West Bengal government under its Electric Vehicle Ecosystem Policy 2022 aims to promote the implementation of EVs and enable investment into charging infrastructure. The state targets to deploy 10 lakh EVs and 100,000 public and semi-public charging stations with R&D grants and other incentives.

Source: West Bengal Power, Government of West Bengal

RJ

The Rajasthan government offers three types of asset creation incentives from which the manufacturers can choose:

- Investment subsidy of 75 per cent on the state tax due and deposited for a period of 7 years
- Capital subsidy from 13–28 per cent of Eligible Fixed Capital Investment to be disbursed in annual instalments over 10 years
- Turnover linked incentive in the range of 1.2–2.0 per cent of net sales turnover to be disbursed annually for 10 years.

Source: iStart Rajasthan, Government of Rajasthan

MP

The Madhya Pradesh government provides rebate on land premium of up to 75 per cent for a land size up to 1 hectare and 50 per cent for a land size up to 20 hectare under Madhya Pradesh Industrial Development Corporation (MPIDC) developed industrial areas. The state government offers Investment Promotion Assistance (IPA), which offers a tax-free investment support to large-scale industries. The assistance ranges from 40 per cent to 10 per cent of the investment in plant and machinery, with a minimum investment requirement of INR10 crore (USD1.2 million).

Source: Invest India

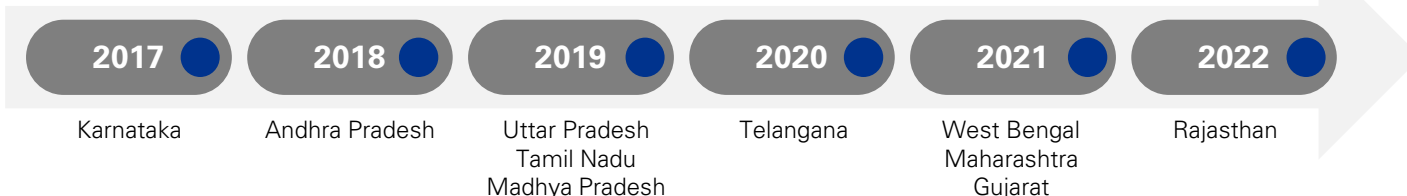
Note - TN: Tamil Nadu; KA: Karnataka; GJ: Gujarat; MH: Maharashtra; AP: Andhra Pradesh; TG: Telangana; UP: Uttar Pradesh; WB: West Bengal; RJ: Rajasthan; MP: Madhya Pradesh. For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

Multiple states and territories across India launched EV policies to drive the adoption and transition to EVs.

State-led EV policies offer various supply side specific incentives, including electricity tax exemptions, stamp duty exemptions, investment promotion subsidies, employment

incentives and subsidies on the cost of land, among others. Policies governing the EV sector also offer state-level incentives, including State Goods and Service Tax (SGST) exemptions, motor vehicle tax exemptions, registration fee exemptions and road tax exemptions to the consumers.

Timeline for select state/territory specific EV policy notifications¹¹²:



1.4.3 Key trends driving the sector

India became the third-largest automotive market recently and is expected to become the largest automotive market in the next five years, reaching USD300 billion by 2026, as per the Automotive Mission Plan 2016–2026 (AMP 2026).¹¹³ The AMP focuses to position the Indian automotive industry as a significant contributor to the Make in India programme and elevate India as a global manufacturing centre.

- With the **EV sub-sector expected to grow at 49 per cent during 2022–2030**, this can generate five million direct and indirect jobs by 2030. The country aims to be the largest EV market by 2047¹¹⁴
- To meet this vision, several policies and measures have been introduced, such as vehicle scrappage policy, the EMPS 2024, FAME scheme and e-Vehicle policy, among others.

India – an established manufacturing destination: Post the pandemic, global OEMs and automobile manufacturers are adopting the China-Plus-One strategy to ensure efficient supply chains. **India plans to invest USD7 billion during 2024–2028** aimed to deepen the localisation of auto components, including electric motors and automatic transmissions, to reduce imports.¹¹⁵

The auto component industry witnessed double-digit sales growth in the previous fiscal year and is expected to continue this trend in the current fiscal year. It is projected to grow to USD 200 billion¹¹⁶ by 2026 presenting avenues for

investment in the sector.¹¹⁷

Opportunities in the EV segment: The development of the charging infrastructure is gaining momentum due to government policies and the expansion efforts of EV players, in line with **Gol's target for 30 per cent of all vehicles to be electric by 2030**.¹¹⁸

Foreign Direct Investment (FDI) has been a driving force in the evolution and expansion of India's automotive sector. The sector has attracted FDI worth more than USD36.2 billion during 2000–2024¹¹⁹. **Under the automatic route, 100 per cent FDI is allowed for the sector, which offers a huge investment potential of USD200 billion in the next 8–10 years**.¹²⁰

The country witnessed an increase in automobile exports. Major destinations for India's automobile exports include the US, South Africa, Mexico, Thailand, Bangladesh, Germany, the UAE, Nigeria and Turkey, among others.¹²¹

- In FY2023–2024, **vehicles' exports accounted for USD20.8 billion**¹²²
- India's contribution in global exports of passenger vehicles increased by ~14 per cent between April 2023 and March 2024¹²³
- In FY23, **the MSME exports contribution** to engineering goods, which include automotive equipment, **was 19.6 per cent**¹²⁴.

1.4.4 Way forward

India's automotive industry holds immense potential for growth and innovation, driven by rapid urbanisation, infrastructural advancements and a growing middle class. Key investment areas include EVs and related infrastructure, R&D, domestic manufacturing under Make in India and enhancing customer experience through innovative technologies. Initiatives such as the PLI scheme offer opportunities to tap into the large

export market, providing economies of scale and aiding in global competitiveness.

These market drivers and government initiatives collectively support the dynamic growth of India's automobile market, making it an attractive destination for both domestic and international investors.

¹¹² Overview of state electric vehicle policies, NITI Aayog, accessed in October 2024

¹¹³ Indian auto industry to reach US\$ 300 bn by 2026, Ministry of External Affairs, accessed in October 2024

¹¹⁴ Automobile Sector, Invest India, accessed in October 2024

¹¹⁵ Auto component industry to invest US\$ 7 billion over next five years, Ministry of External Affairs, accessed in October 2024

¹¹⁶ Auto Components Sector, Invest India, accessed in October 2024

¹¹⁷ Auto Components Industry in India, IBEF, accessed in October 2024

¹¹⁸ NITI Aayog convenes India's Electric Mobility Enablers under G20 Presidency, NITI Aayog, July 2023, accessed in October 2024

¹¹⁹ Quarterly Fact Sheet, DPIIT, accessed in October 2024

¹²⁰ Automobile Industry in India, IBEF, accessed in October 2024

¹²¹ Merchandise EXIM Dashboard, Ministry of Commerce and Industry, accessed in October 2024

¹²² Ministry of Commerce and Industry (HSN codes: 87), accessed in October 2024

¹²³ Invest in Indian Automobile Industry, Invest India, accessed in October 2024

¹²⁴ Merchandise EXIM Status Report of India's MSME Sector, Government of India, accessed in October 2024

1.5 Battery storage

India's aim to achieve net-zero status through renewable energy resources requires innovative battery storage systems that offer advanced capabilities

India's battery storage sector can emerge as a key enabler to domestic and global energy transition initiatives as advanced Energy Storage Systems (ESS) can store energy from renewable sources and release it during times of high

demand. GoI has aimed to achieve 500 GW of non-fossil fuel energy and reduce the emission intensity of its GDP by 45 per cent by 2030.¹²⁵

The National Electricity Plan (NEP) 2023, drafted by the Central Electricity Authority, projects energy storage capacity requirement of 82.3 GWh in 2026–2027. This is further expected to increase to 411.4 GWh in 2031–2032.¹²⁶

The Ministry of Power has set a long-term trajectory for Energy Storage Obligations (ESO), with targets increasing from 1 per cent in FY2023–24 to 4 per cent by FY2029–30 at an annual increment of 0.5 per cent.¹²⁷

Battery cell manufacturing in India is dependent on raw materials, including rare minerals such as lithium and cobalt, which are required for battery production.

India's battery storage landscape: Increasing demand to achieve a sustainable future

34.7 GWh

Expected Battery Energy Storage Systems (BESS) required by 2026–27

236.2 GWh

Projected BESS required by 2031–32

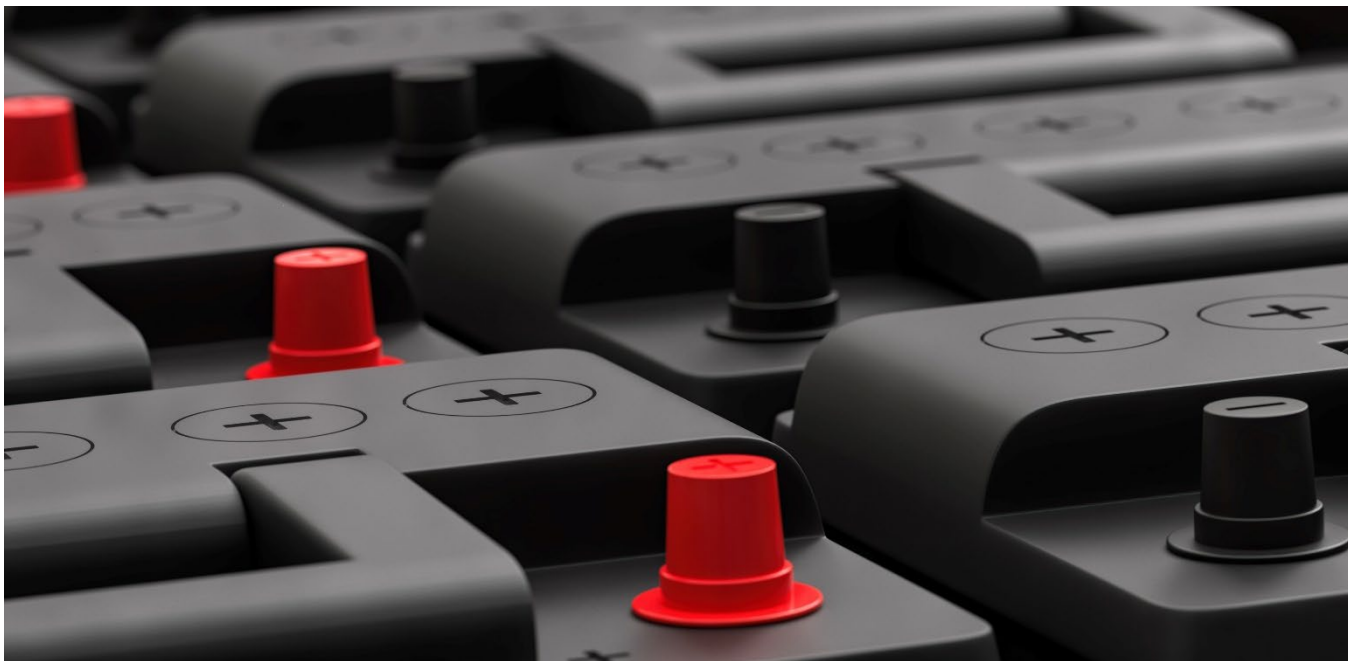
47.65 GWh

Expected Pumped Storage Plants (PSP) required by 2026–27

175.18 GWh

Projected PSP required by 2031–32

Source: Ministry of New and Renewable Energy (MNRE)



¹²⁵ 500GW Nonfossil Fuel Target, Government of India, accessed in October 2024

¹²⁶ Central Electricity Authority notifies the National Electricity Plan for the period of 2022-32, Ministry of Power, accessed in October 2024

¹²⁷ Energy Storage Systems (ESS) Overview, Ministry of New and Renewable Energy, accessed in October 2024

1.5.1 Central government-led key incentives, policies and initiatives to enable the sector

National Framework for Promoting Energy Storage: The framework was created in August 2023 to develop an ecosystem for energy storage development in India.¹²⁸ Some of the key aspects include 24X7 dispatchable renewable energy power, i.e., RE-RTC (Renewable Energy-Round The Clock); incentivising the deployment of ESS to reduce greenhouses gases and overall costs; improving grid stability by deploying ESS, which provides frequency regulation, voltage support, ramping and other ancillary support services; and promoting energy independence in remote areas, among others.

- To ensure the provision of stable and reliable power, new renewable energy projects (excluding hydroelectric) with an installed capacity exceeding 5 MW, or as defined by the central government, may be required to incorporate ESS for no less than 5 per cent of their renewable energy capacity. Hydroelectric projects are encouraged to establish a minimum pondage capacity, facilitating the management of fluctuation in energy generation and addressing peak demand scenarios¹²⁸
- In alignment with this directive, a complete waiver of Inter-State Transmission System (ISTS) charges will be applicable to both BESS and Pumped Storage Projects (PSP) that are commissioned until the end of June 2025.

PLI scheme for National Programme on Advanced Chemistry Cell (ACC) Battery Storage: The National Programme on ACC was approved by Gol in May 2021 with a total

incentive payout of INR18,100 crore (USD2.1 billion) over the period of five years of the scheme. This scheme aims to incentivise both domestic and overseas investors to set-up Giga-scale ACC and battery manufacturing facilities. Under the scheme, the beneficiary firm is required to achieve a domestic value addition of at least 25 per cent and enhance it to 60 per cent within five years, while also ensuring a mandatory investment of INR225 crore per GWh (USD27 million per GWh) for committed capacity within two years.¹²⁹ The scheme is aims to attract INR45,000 crore (USD5.4 billion) from domestic and foreign investors.¹³⁰

In the **Union Budget 2024–2025, Gol removed customs duty on lithium to lower input costs** to enhance value addition, encourage export competitiveness, amend the inverted duty structure and stimulate domestic manufacturing.

Capital outlay by the government

Viability Gap Funding (VGF): Launched in September 2023, **Gol approved VGF for the development of BESS with an initial financial outlay of INR9,400 crore (USD1.1 billion) which includes budgetary support of INR3,760 crore (~USD449 million).** The scheme aims for the development of 4,000 MWh capacity BESS projects by 2030–31, with financial support of up to 40 per cent of the capital cost as budgetary support and to achieve a Levelised Cost of Storage (LCoS) ranging from INR5.5–6.6 (~USD0.07-0.08) per kilowatt-hour (kWh).¹³¹



¹²⁸ National Framework for Promoting Energy Storage, Ministry of New and Renewable Energy, accessed in October 2024

¹²⁹ PLI Scheme for National Programme on Advanced Chemistry Cell (ACC) Battery Storage, Ministry of Heavy Industries, accessed in October 2024

¹³⁰ Cabinet approves Production Linked Incentive scheme "National Programme on Advanced Chemistry Cell Battery Storage", PIB, accessed in October 2024

¹³¹ Cabinet approves the Scheme titled Viability Gap Funding for development of Battery Energy Storage Systems (BESS), Press information Bureau (Ministry of Power), September 2023, accessed in October 2024

1.5.2 State-level key policies and incentives in the sector

State incentives and policies are catalysing the transformation of India's BESS sector, with clean energy ambitions, R&D investments and supportive measures, such as customs duty exemptions on lithium, fostering domestic manufacturing and cost reduction, reinforcing India's pursuit of self-sufficiency in renewable energy

Battery storage sector incentives/policies across top Indian states

TN

Tamil Nadu's Pumped Storage Projects (PSP) Policy 2024 aims to enhance renewable energy use and ensure sustainable energy development. The policy targets harnessing PSP potential, supporting sustainable energy, meeting renewable purchase obligations, encouraging public-private partnerships and creating jobs, with benefits including **a 50 per cent reduction in stamp duty and registration fees, a 10-year exemption from electricity taxes, single-window clearance and no water cess**. PSP developers are permitted to establish captive solar or wind power plants with energy banking facilities to fulfill their power requirements.

Source: Tamil Nadu Generation and Distribution Corporation, Government of Tamil Nadu

KA

Karnataka's Electric Vehicle & Energy Storage Policy 2017 positions the state as a hub not only for EV manufacturing and the growing energy storage industry. It offers **financial incentives, including subsidies for energy storage manufacturing and assembly enterprises, tax exemptions and assistance for land conversion**, aiming to attract significant investments into the energy storage sector. This strategic focus underscores Karnataka's commitment to leading the transition towards sustainable energy solutions, with the policy's effectiveness extending for five years or until a new policy is introduced.

Source: Mission Startup Karnataka, Government of Karnataka

AP

The Andhra Pradesh's Pumped Storage Power Promotion Policy 2022 aims to utilise the state's 33 GW pumped hydro storage potential to support renewable energy goals and climate action efforts. The policy offers financial incentives to developers, including potential grants, under the National Energy Storage Policy and eligibility for mega industry schemes, alongside streamlining land allocation and statutory clearances to encourage private investment in Pumped Storage Projects.

Source: New & Renewable Energy Development Corporation of Andhra Pradesh Ltd., Government of Andhra Pradesh

TG

As per **Telangana Electric Vehicle and Storage Policy 2020–30**, the government provides **manufacturing incentives, including 20 per cent capex subsidy capped at INR30 crore (USD3.6 million), power tariff discount of 25 per cent up to INR5 crore (USD597,960) and electricity duty exemption of 100 per cent for five years capped at INR5,00,000 (USD5,979)**, among others. The **state also collaborates** with battery manufacturers, EV manufacturers, energy storage operators and recyclers **for efficient reuse of energy storage batteries**.

Source: National Single Window System, Government of India

UP

The Uttar Pradesh Solar Energy Policy 2022 aims to generate 22,000MW of solar power by 2026–2027, reducing dependency on fossil fuels and offering low-cost, reliable power within the state. It offers a subsidy of INR2.50 crore/MW (USD298,400/MW) for utility-scale solar systems with **four hours of battery storage**.

Source: Uttar Pradesh New & Renewable Energy Development Agency, Government of Uttar Pradesh

RJ

The Rajasthan Renewable Energy Policy 2023 is designed to advance the development of renewable energy, including battery storage and pumped storage, to aid grid integration and the adoption of renewable energy sources. **Financial incentives tailored for energy storage projects include additional benefits for projects that couple renewable energy with storage solutions**. These incentives aim to attract investments in renewable energy projects, highlighting Rajasthan's strategy to evolve into a renewable energy hub by maximising the use of its solar and wind energy potential and promoting the utilisation of electric vehicles powered by renewable sources.

Source: Rising Rajasthan, Government of Rajasthan

MP

The Madhya Pradesh Renewable Energy Policy 2022 provides financial incentives specifically for renewable energy-sourced energy storage projects to promote the utilisation of commercially available energy storage technologies. These projects, when paired with renewable energy generation, qualify for an **additional incentive if they have a minimum storage capacity of one-tenth the generation capacity and maintain a minimum annual capacity utilisation factor of 35 per cent**.

Source: New and Renewable Energy Department, Government of Madhya Pradesh

Note - TN: Tamil Nadu; KA: Karnataka; AP: Andhra Pradesh; TG: Telangana; UP: Uttar Pradesh; RJ: Rajasthan; MP: Madhya Pradesh. For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

1.5.3 Key trends driving the sector

There are **constant advancements being made in RTC renewable energy**, including solar, wind, hydro and other similar sources driven by Gol's focus on achieving net-zero carbon emission. India's total renewable energy installed capacity stands at 201.4 GW, with solar and wind making up 90.7 GW and 47.3 GW, respectively.¹³² An upward demand is witnessed to efficiently store energy to use it during non-renewable generating hours.

- As of March 2024, India's cumulative BESS capacity reached 219.1 MW.¹³³ The country has a manufacturing capacity pipeline of 96 GWh for BESS in the next six years.¹³⁴

India's BESS market—growth and technological shifts:

The prospect of technological innovations in battery storage technologies, combined with India's ambitious goal to achieve approximately 500 GW of renewable energy capacity by 2030, presents significant potential for the expansion of the BESS market in India during the forecast period.¹³⁵ The focus on domestic manufacturing and the development of indigenous battery storage technologies essential for grid safety, stands to further drive the market aiding government initiatives to increase energy storage deployment.

Supply chain shifts towards self-reliance: India is actively working on strengthening its lithium supply chain to support the growing battery storage sector and secure a green energy future. The country has heavy reliance on imports for lithium—a key component in battery technology.

- In 2024, the Ministry of Coal incorporated a JV to investigate the long-term supply of raw materials through collaborations and participations. The JV is currently investigating prospects for acquiring international assets in critical minerals such as lithium and cobalt, with ongoing projects and agreements in Argentina, Australia and Chile
- **In 2023, the discovery of lithium reserves in Jharkhand, Rajasthan and the Union Territory of Jammu and Kashmir captured the interest of both government and private entities.** The government facilitated this interest by simplifying the auction process for lithium mining, inviting private sector participation, a

notable shift from the prior dominance of state-run companies. In early 2024, 20 blocks of critical minerals including lithium were auctioned with plans to auction an additional 15 offshore mineral blocks in 2024.¹³⁶

To further promote domestic manufacturing and develop a reliable and efficient mineral supply chain, **the government is liberalising mining sector policies to promote the participation of private players.** These reforms are part of a broader strategy to reduce India's reliance on foreign sources for strategic minerals and strengthen its position in the global supply chain.

India's lithium battery exports on the rise: In 2023, India exported lithium cells and batteries worth USD4.3 million, a 1.8 per cent increase from 2022. Cumulatively, the export for lithium cells and lead acid accumulator amount to USD648 million.¹³⁷

A leap forward in energy storage with solid-state technology: The energy storage sector is witnessing the adoption of solid-state batteries (SSBs) that can offer considerable business advantages such as enhanced safety, longevity and performance, promising efficiency and sustainability in energy storage solutions.

Towards a greener future with Hybrid Energy Storage in India: Hybrid Energy Storage Systems (HESS), combining multiple storage technologies such as batteries and supercapacitors, present a unique opportunity to transform India's energy landscape and transition away from fossil fuels. The superior performance and sustainability of HESS make them ideal for microgrids and standalone energy applications.

Unlocking potential in India's expanding BESS market: India encourages foreign investment in the sector, allowing 100 per cent FDI in renewable projects offering a prime opportunity for global investors to tap into the expanding BESS market. India is aiming for 500 GW of clean energy by 2030, a goal that underscores vast opportunities in the BESS sector and expects an investment of INR30.5 trillion (~USD376 billion) between 2024 and 2030.¹³⁸

1.5.4 Way forward

India's BESS sector is poised for transformation, driven by ambitious clean energy targets, investments in R&D and supportive government policies. The exemption of customs duty on lithium and initiatives to bolster domestic manufacturing reduce costs and stimulate growth, aligning with India's vision of

becoming a self-sufficient leader in renewable energy. As the demand for efficient battery storage solutions increases, the ongoing strategic policy adjustments ensure India's competitive edge in the global BESS market.

¹³² Renewable Energy, Invest India, accessed in October 2024

¹³³ India needs Rs. 30 lakh crores investment during FY 2024-2030 to meet its COP Climate Pledges: IREDA CMD at World Bank Webinar, PIB, accessed in October 2024

¹³⁴ Battery energy storage capacity grows over four-fold to 219 MW in the first quarter of 2024: Report, IBEF, accessed in October 2024

¹³⁵ Renewable Energy in India, Invest India, accessed in October 2024

¹³⁶ Launching of Critical Mineral Blocks Auction, PIB, accessed in October 2024

¹³⁷ Ministry of Commerce and Industry (HSN codes: 850650, 850750, 850710, 850720, 850730), accessed in October 2024

¹³⁸ Renewable energy sector to get Rs 30.5 trn investments by 2030 *Round The Clock, Economic Survey 2023-24, accessed in October 2024

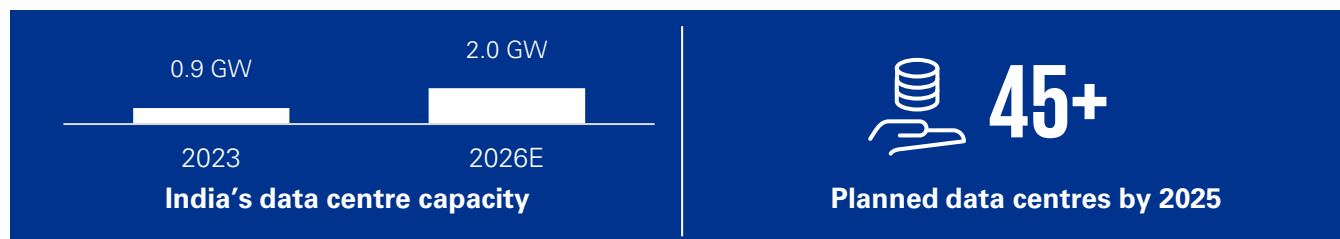
1.6 Data centre

India's data centre sector presents a dynamic investment opportunity, powered by digital transformation, expanding data traffic and supportive government policies

In the modern digital era, data centres serve as the backbone of the global economy, playing a pivotal role in driving digital transformation. India's data centre sector is experiencing growth driven by various market factors and supportive government policies, with the technology, IT and telecom

sector among key contributors. The government's push for data localisation, the expansion of cloud services and the adoption of new technologies, such as AI and IoT, are further propelling the sector.

Present scenario and potential — Steering the landscape of India's data centre sector



Source: Invest India, IBEF

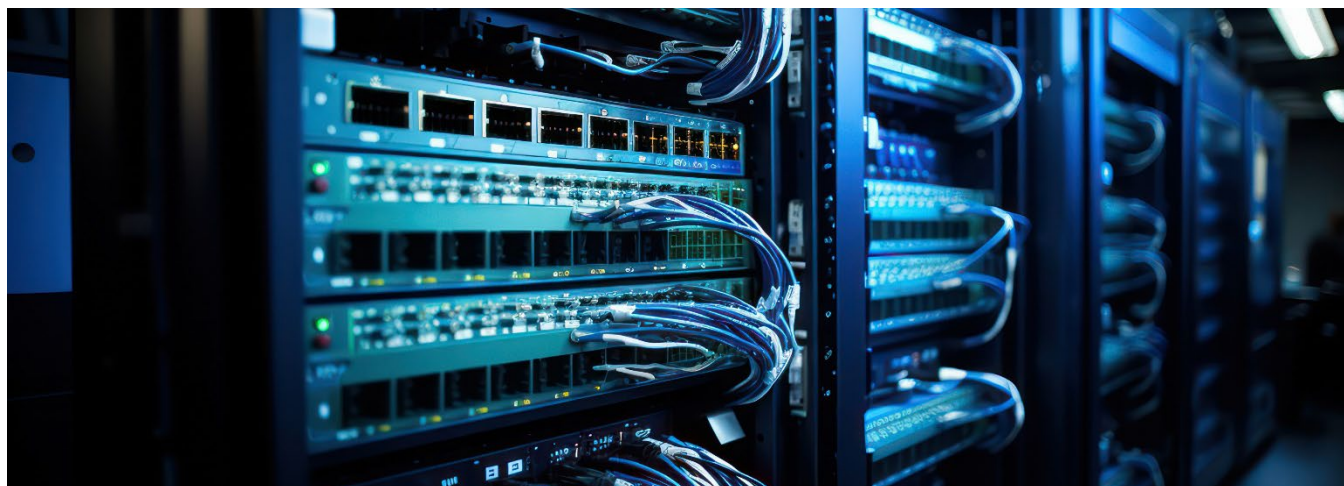
1.6.1 Central government-led key incentives, policies and initiatives to enable the sector

In 2020, the Indian government demonstrated its commitment to the data centre sector by introducing a draft of the Data Centre Policy, which supports the nation's digital economy and aims to establish India as a global data centre hub. It is further supported by digitisation initiatives, such as Digital India, as well as data localisation norms, acting as catalysts for the sector development.

Draft Data Centre Policy 2020: It aims to **regulate data centres** in India with a focus on data localisation, energy efficiency and security standards, alongside fostering a conducive business environment through infrastructure status, simplified clearances, reliable power supply, technology development and policy governance mechanisms.¹³⁹

TRAI's Regulatory Framework for Promoting Data Economy: It aims to promote India's data economy by establishing data centres, content delivery networks and Interconnect Exchanges (IXPs). This includes an incentivisation scheme for infrastructure establishment, a data sharing and consent management framework and a separate authorisation for IXPs, among other measures, to instigate digital growth and ensure ethical data usage.¹⁴⁰

Proposal to set up data embassies: In February 2023, the government announced plans to set up 'data embassies' as a secure digital continuity solution for global partners to be hosted in Gujarat International Finance Tec-City (GIFT City).¹⁴¹



¹³⁹ India to be a cloud computing and data centre hub, PIB, accessed in October 2024

¹⁴⁰ Regulatory Framework for Promoting Data Economy, TRAI, accessed in October 2024

¹⁴¹ Union Budget 2023-24, Government of India, accessed in October 2024

1.6.2 State-level key policies and incentives

State governments have enforced policies that provide incentives to stimulate investments in data centres, recognising their role in infrastructure development, economic growth, enhancing connectivity, fostering innovation, boosting regional competitiveness and supporting the digital economy.

State-level policies encompass IT/ITeS strategies and sector-specific data centre policies, along with incentives emphasising the promotion of technological infrastructure and innovation to develop data centres.

Data centre sector incentives/policies across top Indian states

TN

Tamil Nadu offers **land cost subsidy** of up to 50 per cent, subsidy of up to 100 per cent on **stamp duty concession**. **Data centres using Tamil Nadu-based MSMEs as subcontractors for on-site services** are offered incentives.

Source: Tamil Nadu Information Technology Department, Government of Tamil Nadu

KA

The Karnataka Data Centre Policy provides attractive incentives for firms establishing data storage facilities beyond Bengaluru, including a capital subsidy up to INR10 crore (USD1.2 million), a land subsidy of 10 per cent up to INR3 crore (USD360,000), complete stamp duty waiver for up to 10 acres, reduced registration charges and full exemption from land conversion fees.

Source: Department of Electronics, Information Technology, Biotechnology, Government of Karnataka

GJ

The Gujarat IT/ITeS Policy (2022–2027) was introduced to enhance the state's IT sector and workforce, driving investment, job creation and growth. Projects below INR250 crore (USD29.8 million) can avail up to 25 per cent capex support and mega projects receive similar capex and opex supports with a cap of INR200 crore (USD23.9 million).

Source: Gujarat State Electronics Mission (GSEM), Government of Gujarat

MH

The Maharashtra government under its **IT Policy 2023** offers up to 100 per cent exemption on stamp duty and 100 per cent exemption from electricity duty for both new and existing registered data centre units.

Source: Maitri Maharashtra Industry, Government of Maharashtra

AP

Under its **IT Policy 2021–2024**, the state government offered one-time land cost incentive of INR50,000 (USD597) per employment created capped at 60 per cent of the land value and transport subsidy of INR500 (USD6) per employment position per month for a period of two years capped at INR1 million (USD11,943) per firm.

Source: Andhra Pradesh Trade Promotion Corporation, Government of Andhra Pradesh

TG

- The Government of Telangana offers **incentives such as 25 per cent subsidy on lease rentals** up to INR5,00,000 (USD5,972) per annum for a period of three years. **R&D grants** are provided to companies of up to 10 per cent of overall R&D expenses.
- Twenty-five per cent of reimbursement is offered on internet costs to data centre start-ups capped at INR2,50,000 (USD2,986) per year for the first three years of operations.

Source: Invest in Telangana, Government of Telangana

UP

- The Government of Uttar Pradesh, under its **Data Centre Policy 2021**, provides various incentives, including capital subsidy of 7 per cent to units capped at INR10 crore (USD1.2 million).
- It also offers 100 per cent exemption on stamp duty for first transaction and 50 per cent on second transaction to both park and units and electricity duty exemption of 100 per cent for 10 years to units, among others.

Source: Invest UP, Government of Uttar Pradesh

WB

The West Bengal government, under its **Data Centre Policy 2021**, offers incentives including 100 per cent exemption of stamp duty and registration fees on any transaction for data centre establishment and waiver on electricity duty consumption for a period of five years from the commencement of the commercial operations, among others.

Source: Department of Information Technology & Electronics, Government Of West Bengal

RJ

In September 2024, Rajasthan government approved **Rajasthan Investment Promotion Scheme (RIPS)** which offers incentives to various sectors including data centre. As a part of this the state government offers an incentive of flexible model for payment of land cost for investors establishing manufacturing units under which post the 25 per cent payment of the land cost in advance the remaining amount can be paid in 10 instalments with 8 per cent interest.

Source: Rising Rajasthan, Government of Rajasthan

MP

The Madhya Pradesh IT, ITeS, ESDM, Investment Promotion Policy 2023, various incentives are being provided including 25 per cent CAPEX support for first 5 anchor data centres with a minimum investment of INR500 crore (USD60 million), electricity duty exemption for connections and one-time quality certification reimbursement of 50 per cent up to INR6 lakh (~USD7,175).

Source: Invest MP, Government of Madhya Pradesh

Note - TN: Tamil Nadu; KA: Karnataka; GJ: Gujarat; MH: Maharashtra; AP: Andhra Pradesh; TG: Telangana; UP: Uttar Pradesh; WB: West Bengal; RJ: Rajasthan; MP: Madhya Pradesh. For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

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1.6.3 Key trends driving the sector

- India's **expanding internet user base**, the **introduction of 5G services**, **adoption of analytics and AI**, **growth in fintech and OTT streaming**, along with **government initiatives** such as **Digital India**, **Aadhaar** and **UPI**, are generating substantial data volumes, presenting a **significant investment opportunity to expand data centre capacity** in the country.
- The sector benefits from its classification under the infrastructure category and **up to 100 per cent FDI is allowed through the automatic route**
- The inflow of investments in Indian data centre sector is attributed to India's expanding digital infrastructure, technology penetration and favourable regulatory environment.

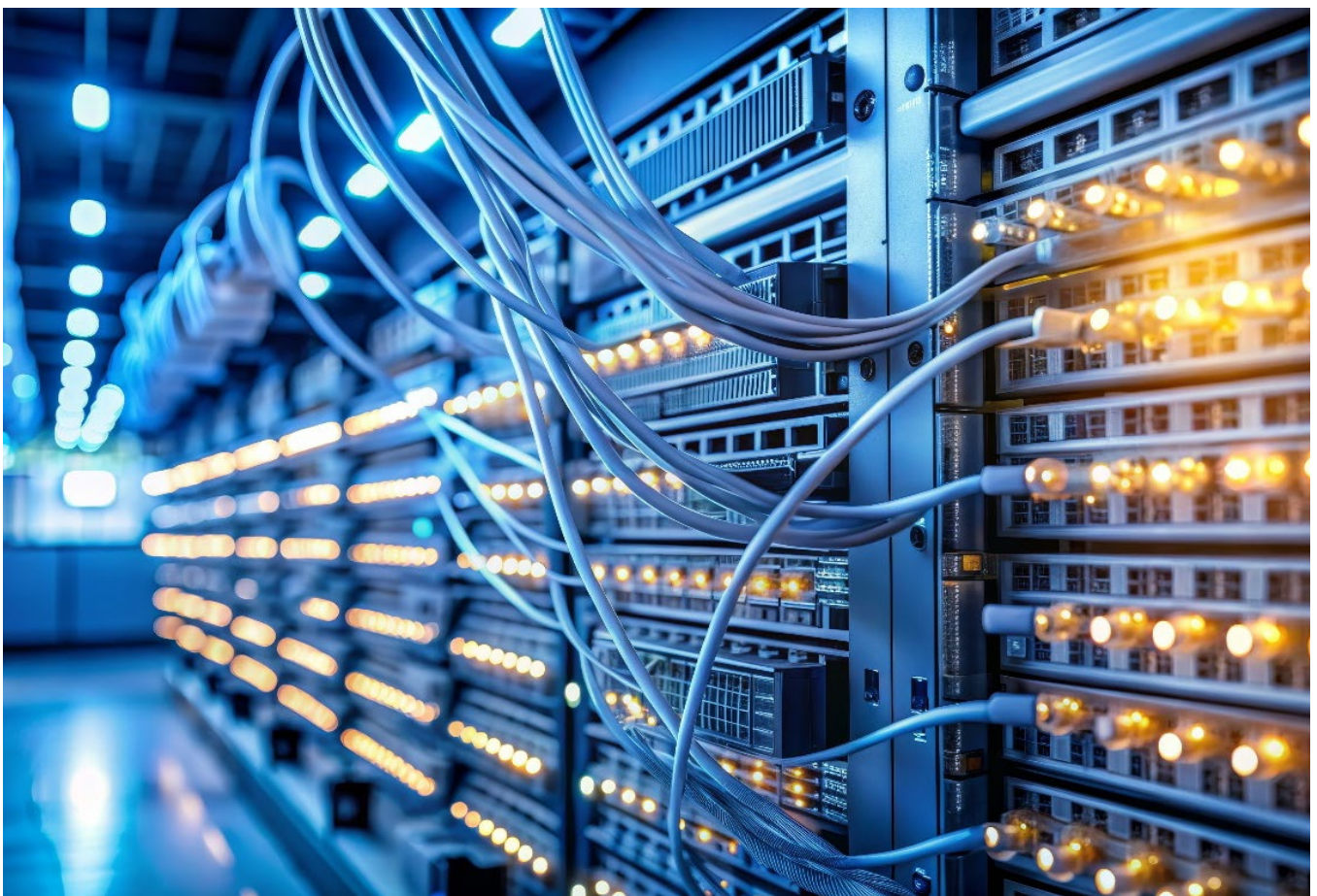
1.6.4 Way forward

India is striving to become a global hub for data centres, catalysed by the growing shift of businesses from legacy systems to cloud platforms, increasing adoption of AI and analytics, heightened focus on data privacy and escalating data consumption.

The country's growth vision underscores sustainable development and green data centres, driving

transformations towards energy-efficient designs and operations and opening new investment opportunities in green technology.

With substantial investments and a dynamic regulatory environment, India's data centre landscape offers immense opportunities for domestic and international investors.



1.7 Logistics and warehousing

The sector is undergoing transformative growth driven by strategic government initiatives, robust foreign investments and technological innovations

The logistics and warehousing sector in India has become a pivotal element of the nation's economic activities, driven by the swift expansion of e-commerce, retail and manufacturing. This growth is underpinned by substantial investments, evolving infrastructure and robust government support, positioning the sector for significant growth and

international competitiveness. India moved up in the World Bank's Logistics Performance Index, from 44th in 2018 to 38th in 2023 out of 139 countries, aided by government measures such as trade facilitation and lower logistics cost.¹⁴²

Gol's objective to reduce logistics costs is driving the sector to leverage increasing demand for value-added services, such as third-party logistics (3PL).

Adapting to market shifts, the warehousing sector in India is witnessing growth through vertical integration and multi-level warehouses, optimising space in land-scarce urban areas for greater efficiency and sustainability.

The demand for warehousing is expanding in tier-2 and tier-3 cities due to optimised costs and untapped markets, attracting investments and expansions facilitated by industrial and transportation connectivity.

India's logistics and warehousing landscape: A cornerstone of the nation's economy

22 million

employment generation under logistics by 2025

38th rank

Logistics Performance Index

Out of 139 countries

100%

FDI via the automatic route in logistics and warehousing

Source: IBEF, Economic Survey 2023-24

1.7.1 Central government-led key incentives, policies and initiatives to enable the sector

National Logistics Policy (NLP): Launched in September 2022, the policy aims to transform India's logistics sector through enhancements such as digitisation, network improvements, port automation and sustainable initiatives.¹⁴³

A conscious push towards reducing logistics costs is underway and this is poised to directly result in lowering export costs. The NLP's efforts will **elevate the competitiveness of Indian MSMEs**, streamlining their integration into global supply chains, reducing their operational costs and ultimately enhancing their profitability.

Unified Logistics Interface Platform (ULIP): ULIP was launched with the NLP **to digitally integrate the logistics sector** and has witnessed **registrations from over 614 industry players**, 106 private companies signing NDAs and 142 companies proposing 382 use cases.¹⁴³

Capital outlay by the government

The PM GatiShakti scheme: Launched in October 2021, the initiative focuses on **integrated development, enhanced connectivity infrastructure and minimal environmental impact**, to ensure seamless movement of goods and services and infrastructure enhancement projects, such as dedicated freight corridors. An amount of **USD596 million was earmarked for the scheme.**¹⁴⁴

Sagarmala initiative: Launched in 2017, the Sagarmala initiative aims to **establish 35 multi-modal logistics parks (MMLPs)** by integrating various transportation modes that offer a range of benefits including reduced costs and improved inventory management. As a part of this initiative, there are 839 projects under implementation with an **investment of USD69.1 billion till 2035.**¹⁴⁵

¹⁴² Economic Survey 2023-24, Government of India, accessed in October 2024

¹⁴³ India marks one year of launch of National Logistics Policy on 17th September 2023, PIB, accessed in October 2024

¹⁴⁴ PMGATISHAKTI TRANSFORMING INDIA'S INFRASTRUCTURE, PIB, accessed in October 2024

¹⁴⁵ Sagarmala, Ministry of Ports, Shipping and Waterways, accessed in October 2024

1.7.2 State-level key policies and incentives

State-level policies and incentives are designed to align with the country's goal of reducing logistics costs, supporting national efforts to streamline supply chains and enhance efficiency.

Logistics and warehousing sector incentives/policies across top Indian states

TN

Tamil Nadu Logistics Policy and Integrated Logistics Plan 2023 offers several incentives, including one-time cash award of 50 per cent of the technology adoption cost, capped at INR10 million (USD119,348), for logistics firms registered in the state. Technology providers developing technology-enabled solutions for logistics efficiency would receive a one-time 100 per cent reimbursement of the patent registration fees. Additionally, logistics trucking companies and enterprises in Tamil Nadu would receive a one-time reimbursement of 100 per cent of vehicle registration charges.

Source: Tamil Nadu Industrial Development Corporation Limited, Government of Tamil Nadu

KA

Karnataka's Industrial Policy 2020–2025 identifies logistics as a key focus area and provides various incentives for its development. Some of the key incentives include investment promotion subsidies of up to 30 per cent of the value of fixed assets for micro enterprises while for large enterprises investing between USD1.3 million–USD33.4 million on fixed assets would receive the investment promotion subsidy depending on its turnover. The state government under the policy offers interest subsidy on technology upgradation loans of up to 10 per cent for a period of five years.

Source: National Single Window System, Government of Karnataka

GJ

Gujarat Integrated Logistics and Logistics Park Policy 2021 offers several incentives including capital subsidy of 25 per cent of EFCI capped at INR15 crore (USD1.8 million) for both development of logistics facilities and non-captive jetties, interest subsidy of 7 per cent for seven years for development of logistics facilities capped at INR15,00,000 (USD17,902), 100 per cent reimbursement on stamp duty, among others.

Source: Gujarat Infrastructure Development Board, Government of Gujarat

MH

Maharashtra Logistics Policy 2024 provides various incentives for development of Logistics Park and Integrated Truck terminal. These projects will be incentivised basis their categorisation with area ranging 5–200 acres and investment ranging 10–400 crore. These will be **eligible for capital subsidies ranging 10–20 per cent**.

Source: Maitri Maharashtra Industry, Trade and Investment Facilitation, Government of Maharashtra

AP

Andhra Pradesh Logistics Policy 2022–2027 offers **100 per cent stamp duty reimbursement** on land registration and **75 per cent reimbursement of the amount paid for patent registrations**. A total of 5 per cent of the area will be allotted to development of logistic facilities and industrial hubs. Projects worth over **INR500 crore (USD59.7 million)** employing over 1,000 people will be eligible for customised incentives.

Source: Andhra Pradesh Trade Promotion Corporation, Government of Andhra Pradesh

TG

Under **Telangana State Logistics Policy 2021–2026**, government of Telangana offers various incentives including 10 per cent capital subsidy capped at INR50,00,000 (USD59,674) per unit on fixed capital invested in building, plant and machinery. For warehouses and cold storages established near tribal zones, a capital subsidy of 20 per cent of fixed capital invested is provided capped at INR75,00,000 per unit (USD89,511). The policy also offers an interest subsidy of 35 per cent on annual interest for the loan taken on development of warehouses and cold storages. This subsidy is capped at INR50,00,000 per unit annually.

Source: Telangana Industries Department, Government of Telangana

UP

As per its Warehousing and Logistics Policy 2022, various incentives are offered including up to 100 per cent stamp duty exemption for storage facilities, dry ports, logistics park and truckers park, 75 per cent concession of land use conversion and development charges before the start of operations.

Source: Invest UP, Government of Uttar Pradesh

WB

West Bengal Logistics Policy 2023 provides streamlined support for logistics and helps in boosting infrastructure, enhancing technology adoption and improving ease of doing business, among others. The government is establishing multi-modal logistics parks and developing freight villages to enhance the cargo infrastructure.

Source: Department of Industry, Commerce & Enterprises, Government of West Bengal

RJ

In September 2024, Rajasthan government approved **Rajasthan Investment Promotion Scheme (RIPS)**, which offers incentives to various sectors. Under the policy, it offers 25 per cent capital subsidy for warehouse and 20 per cent for cold storage, along with other one-time reimbursements.

Source: Rising Rajasthan, Government of Rajasthan

MP

MP government offers investment assistance by providing 15 per cent reimbursement of the total capital expenditure, except for the land, with a capping of INR15 crore (USD1.8 million). The state government also offers **infrastructure development assistance** under which it provides 50 per cent assistance for the expenses incurred for development of the external road/rail infrastructure. This is capped at INR1 crore (USD119,348).

Source: Department of Industrial Policy & Investment Promotion, Government of Madhya Pradesh

Note - TN: Tamil Nadu; KA: Karnataka; GJ: Gujarat; MH: Maharashtra; AP: Andhra Pradesh; TG: Telangana; UP: Uttar Pradesh; WB: West Bengal; RJ: Rajasthan; MP: Madhya Pradesh. For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

1.7.3 Key trends driving the sector

Government initiatives to improve infrastructure and promote digital transformation projects aim to enhance operational efficiency and support sector expansion.

India's logistics and warehousing sector has emerged as the core of the country's growing infrastructure, retail and e-commerce, showcasing tremendous potential for growth and investments and is key to **achieving its USD5 trillion economy goal by FY25**.¹⁴⁶

- India's warehousing market anticipates substantial growth over the next few years, this area is expected to grow to **USD35 billion, reflecting a CAGR of 15.6 per cent, during the period 2022–2027**.¹⁴⁷

Warehousing sector scenario: The **scarcity of high-quality mature warehouse assets** in India, combined with quick construction post-land acquisition, highlights the **potential for greenfield investments**. Improvements over the past decade have led to a significant decrease in capitalisation rates, indicating a maturing industry.

Tech-driven enhancements and sustainability in warehousing efficiency: Technological advancements, including **robotics, warehouse management systems, automated conveyor belts and automated storage and retrieval systems**, are key to achieving efficiency in warehousing operations. The adoption of green warehousing practices—**utilising sustainable construction materials, cool roofing, solar panels, wastewater treatment and**

rainwater harvesting—is gaining momentum for sustainability.

Investments in advanced cold storage: Inadequate cold chain logistics in India lead to low shelf life and delayed deliveries. Predominantly privately owned, the cold storage sector is concentrated in a few regions and facing challenges in efficiently reaching India's vast population.

- Gol initiated the Electronic Vaccine Intelligence Network in response to COVID-19 vaccine distribution. This digital platform **manages vaccine logistics and cold chain tracking nationwide**, addressing critical storage and distribution needs.

Paradigm shift across sectors benefits the logistics and warehousing sector: The transition in India's logistics and warehousing sector is expected to expedite with the introduction of the PLI scheme across other sectors. This **strategic move is aimed to bolster domestic production and infrastructural development**, which could subsequently **augment connectivity and the need for industrial spaces and warehouses**.

Government shifts to boost FDI in accelerating infrastructure growth: While the government has traditionally spearheaded infrastructure development, it has shifted focus to attract private and foreign investment to accelerate this process. **The government has allowed 100 per cent FDI for the sector through the automatic route**.

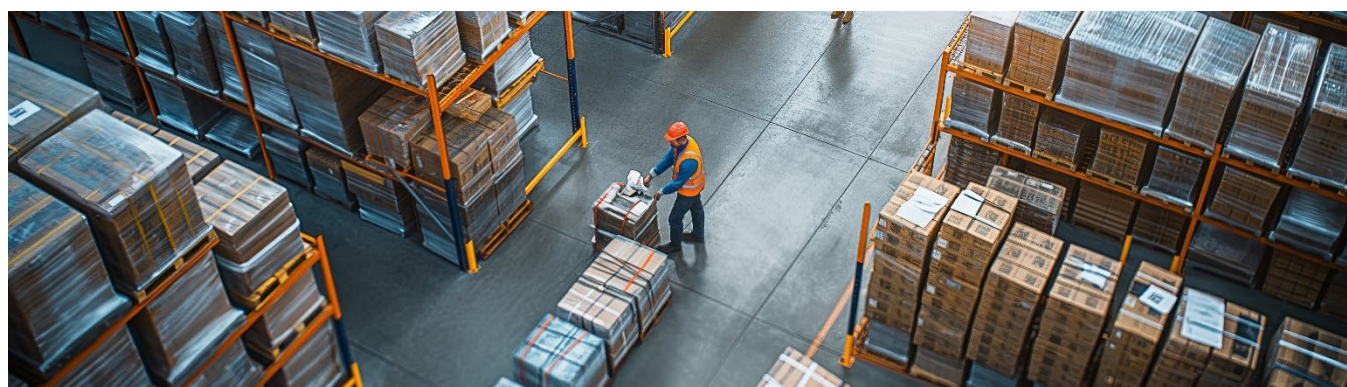
1.7.4 Way forward

Investments in infrastructure are crucial for supporting expansive growth, while policy reforms can simplify regulations and enhance ease of doing business.

India's logistics and warehousing sector is poised for transformative growth, bolstered by strong investments, government support and an evolving market landscape. By focusing on strategic actions and fostering collaboration between the industry and

the government, the sector can enhance supply chain efficiency, create substantial economic opportunities and generate job growth across the country.

By leveraging the strong foundation laid by government initiatives, private investments and technological advancements, India's logistics and warehousing sector is well-positioned to achieve substantial growth and evolve into a global hub.



¹⁴⁶ Vision of a USD5 Trillion Indian Economy, Ministry of Commerce and Industry, accessed in October 2024

¹⁴⁷ India's Warehousing Boom: How Automation Fuels Unprecedented Growth, Invest India, accessed in October 2024

1.8 Space

Soaring to global prominence with innovation, strategic reforms and booming private sector investments

Historically led by the Indian Space Research Organisation (ISRO), the sector is now transforming with increased participation from the private sector and emerging start-ups. This shift is driven by recent policy reforms aimed at

positioning India as a significant player in the global space economy. India's achievements in satellite launch services and space exploration have advanced the country to a prominent place in the global market.

The transformation in India's space policy fosters a synergistic partnership between government space agencies and private enterprises, unlocking unprecedented opportunities for both domestic and international companies.


Technologies, such as space IT solutions and cloud architecture and In-space manufacturing and assembly, are at the forefront of revolutionising space operations, showcasing a trend towards more advanced and efficient space sector capabilities.

The focus on space sustainability, space debris management and responsible space resource utilisation reflects a trending global commitment to ensure the long-term viability of space activities.

The Indian space sector: A new frontier for growth and innovation

45,000

 employment
 generated as of 2023

9%

 of global space
 market by 2030

189

 Space start-ups as of 2023

Source: ISRO, Department of Space and DPIIT Start-Up India Portal



1.8.1 Central government-led key incentives, policies and initiatives to enable the sector

Gol is making a conscious effort to enhance the global competitiveness of India's space sector through strategic investments and policy support.

Indian Space Policy 2023: The Indian Space Policy 2023 is an overarching framework to boost space capabilities, stimulate a commercial space economy and employ space technology for socio-economic growth, environmental protection and peaceful exploration, in line with the Cabinet's reform goals.¹⁴⁸

Indian National Space Promotion and Authorisation Centre (IN-SPACe): Established in June 2020, to facilitate private sector participation in space activities, IN-SPACe acts as a bridge between ISRO and private players offering the private sector an access to ISRO's facilities and expertise. This initiative streamlines processes, reducing barriers to entry and fostering innovation through collaboration.¹⁴⁹

NewSpace India Limited (NSIL): Incorporated in March 2019, NSIL is a government-owned company tasked with commercialising space products, including launch services and satellite fabrication. NSIL is designed to spur growth in the space sector by providing an institutional mechanism for the commercial exploitation of research and development carried out by ISRO. NSIL has declared a comprehensive investment of USD1.2 billion over the next five years (2024–2028) to enhance industry participation and commercial operations within the sector.¹⁵⁰

Satellite Communication Policy: Aimed at regulating satellite communication services, this policy aims to streamline the licensing process, encourage investment in space-based communication and expand access to remote areas, to support national objectives of digital inclusion.¹⁵¹

Continuous government support to foster growth: The Indian government, in Union Budget 2024–2025, **allocated INR13,042 crore (USD1.5 billion) to the Department of Space**. This allocation marks an increase of INR498 crore over the previous year and is aimed at backing ambitious initiatives such as the Gaganyaan mission, which aspires to send the first Indian astronaut into space and establish a dedicated space station by 2035.¹⁵²

In a strategic initiative announced in the Union Budget, the government approved a **Venture Capital Fund** worth **INR1,000 crore (~USD119 million)** for the space sector under IN-SPACe.¹⁵³ This venture is designed to drive technological advancements, bolster innovation and augment research within the space economy. By focusing on stimulating private sector engagement in space exploration and commercialisation, the fund is expected to enhance India's stature in the global space industry and create a supportive ecosystem for non-government entities (NGEs) to thrive.

Private entities have the opportunity to engage in establishing ground stations, which account for 48 per cent¹⁵⁴ of the space sector's budget and delve into space technology applications, contributing 45 per cent to the space economy. The small satellite segment and component manufacturing are anticipated to become key areas for private investment.

In September 2024, the Union Cabinet approved the development of **India's first space station, Bharatiya Antariksh Station (BAS-1)**, scheduled to launch its first module in 2028 as part of the expanded Gaganyaan Programme. This initiative aims to test and validate new technologies essential for the station's construction and operation, incorporating additional missions and hardware into the programme.

Strategy and vision for the Indian space sector: Gol has developed a comprehensive 10-year strategy, envisioning an investment of USD22 billion, to enhance the Indian space ecosystem to position India strongly within the global space sector.¹⁵⁴ The strategy outlines below aspects:

- **Demand generation:** Establishing a Space Outreach Wing within IN-SPACe will enhance end-user awareness and aggregate demand across various sectors, promoting the global visibility of India's space capabilities
- **Data utilisation:** By aggregating and utilising data efficiently from diverse sources, India aims to enhance applications across sectors such as infrastructure, agriculture and disaster management through advanced analytics
- **Earth observation (EO):** The strategic expansion of EO satellite constellations, led by public-private partnerships, will address critical data gaps and empower sector-specific applications with accurate and timely information
- **Navigation:** Strengthening the NavIC constellation and promoting its adoption in regional and potentially global applications will enhance precision navigation and timing services across diverse sectors
- **Communication:** A focused assessment and expansion of SATCOM capacity will ensure robust and high-throughput connectivity, particularly in remote areas, leveraging India's communication satellite infrastructure
- **R&D:** By creating a collaborative R&D roadmap and platform, India aims to drive innovation and technological advancements in the space sector, supported by fiscal incentives and technology transfers

Ecosystem development: Developing private sector capabilities, ensuring a level playing field for new generation enterprises and focusing on indigenisation will build a resilient and innovative space industry ecosystem in India.

¹⁴⁸ Indian Space Policy 2023, ISRO, accessed in October 2024

¹⁴⁹ About, Indian National Space Promotion and Authorisation Centre (IN-SPACe), accessed in October 2024

¹⁵⁰ Space, Invest India, accessed in October 2024

¹⁵¹ Satellite Communications Norms, Guidelines and Procedures, ISRO, accessed in October 2024

¹⁵² India Budget, Department of Space, accessed in October 2024

¹⁵³ Summary of The Union Budget 2024-2025, Ministry of Finance, accessed in October 2024

¹⁵⁴ Decadal Vision and Strategy for Indian Space Economy, IN-SPACe, accessed in October 2024

FDI reforms to liberalise the space sector:

The FDI Policy has undergone liberalisation to attract potential investors, permitting up to 100 per cent FDI under the automatic route for satellite establishment and

operations. Prior to this, FDI in the space sector was permitted only under the government route, specifically for the establishment and operation of satellites and was subject to sectoral guidelines by the Department of Space and ISRO.¹⁵⁵

Particulars	Under the automatic route	Under government approval route
Satellites manufacturing and operation, satellite data products and ground and user segments	Up to 74 per cent	Beyond 74 per cent and up to 100 per cent
Launch vehicles and associated systems or subsystems, creation of spaceports for launching and receiving spacecraft	Up to 49 per cent	Beyond 49 per cent and up to 100 per cent
Manufacturing of components and systems/sub-systems for satellites, ground and user segments	Up to 100 per cent	—

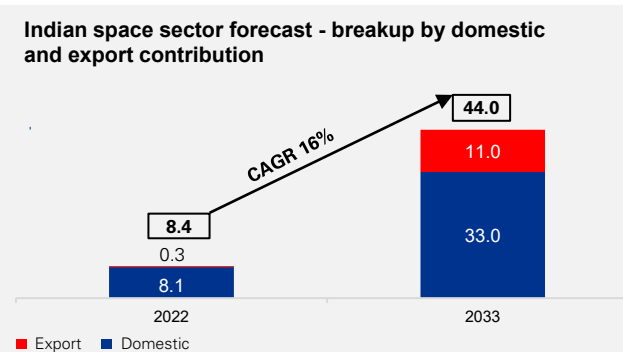
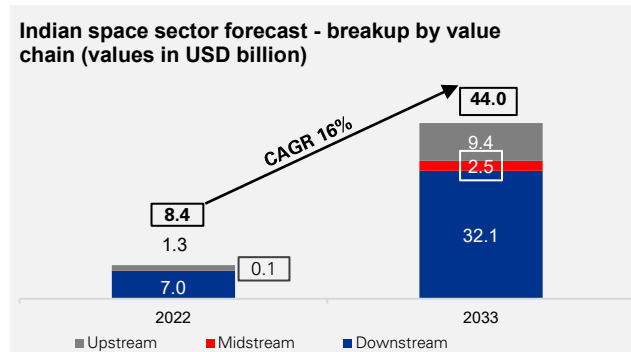
Source: Press Information Bureau

1.8.2 Key trends driving the sector

As of December 2023, the Indian space sector has reached a valuation of **USD8.4 billion**, driven in part by the successful launch of Chandrayaan-3, a lunar exploration mission to operate a rover on the Moon’s surface and Aditya L1 missions, a spacecraft launched to study the solar atmosphere.¹⁵⁶ This sector, propelled by private sector’s growing involvement in satellite manufacturing, launch vehicle production, satellite services and ground systems manufacturing, is on a **trajectory to reach USD44 billion by 2033**.¹⁵⁷

- The year 2023 has been particularly fruitful for **space start-ups in India**, witnessing investments totalling **USD124.7 million**, reflecting the sector’s potential and investor confidence.¹⁵⁸

- Downstream services are crucial to India’s ambitions of becoming a leading space power, as emphasised in its strategic vision for the Indian Space Economy. These services—including earth observation, communication and navigation—are poised to drive industry growth and deliver significant socio-economic benefits. With a market potential of USD32.1 billion by 2033 based on Indian National Space Promotion and Authorisation Centre forecast, downstream services will impact sectors such as agriculture, transport, energy, healthcare and education. This strategy aligns with making space technology accessible and ensuring India’s space capabilities bolster national growth and global competitiveness.¹⁵⁶



Source: Indian National Space Promotion and Authorisation Centre

India’s MSME and start-up ecosystem’s contribution to innovation in space exploration

The MSME sector has significantly contributed to India’s space exploration efforts, notably through its involvement in the Chandrayaan-3 mission. Various institutes under the

Ministry of MSME have showcased advanced capabilities and potential of the aerospace sector by manufacturing 54,000 components for the Chandrayaan-3 mission.¹⁵⁹ Various start-ups have collaborated with ISRO in designing innovative products for the space sector.

¹⁵⁵ Liberalisation of FDI policy for the Space Sector, PIB, accessed in October 2024

¹⁵⁶ Department of Space, PIB, accessed in October 2024

¹⁵⁷ Empowering India’s Space Economy: Rs. 1,000 Crore Venture Capital Fund Initiative for Innovation and Growth, PIB, accessed in October 2024

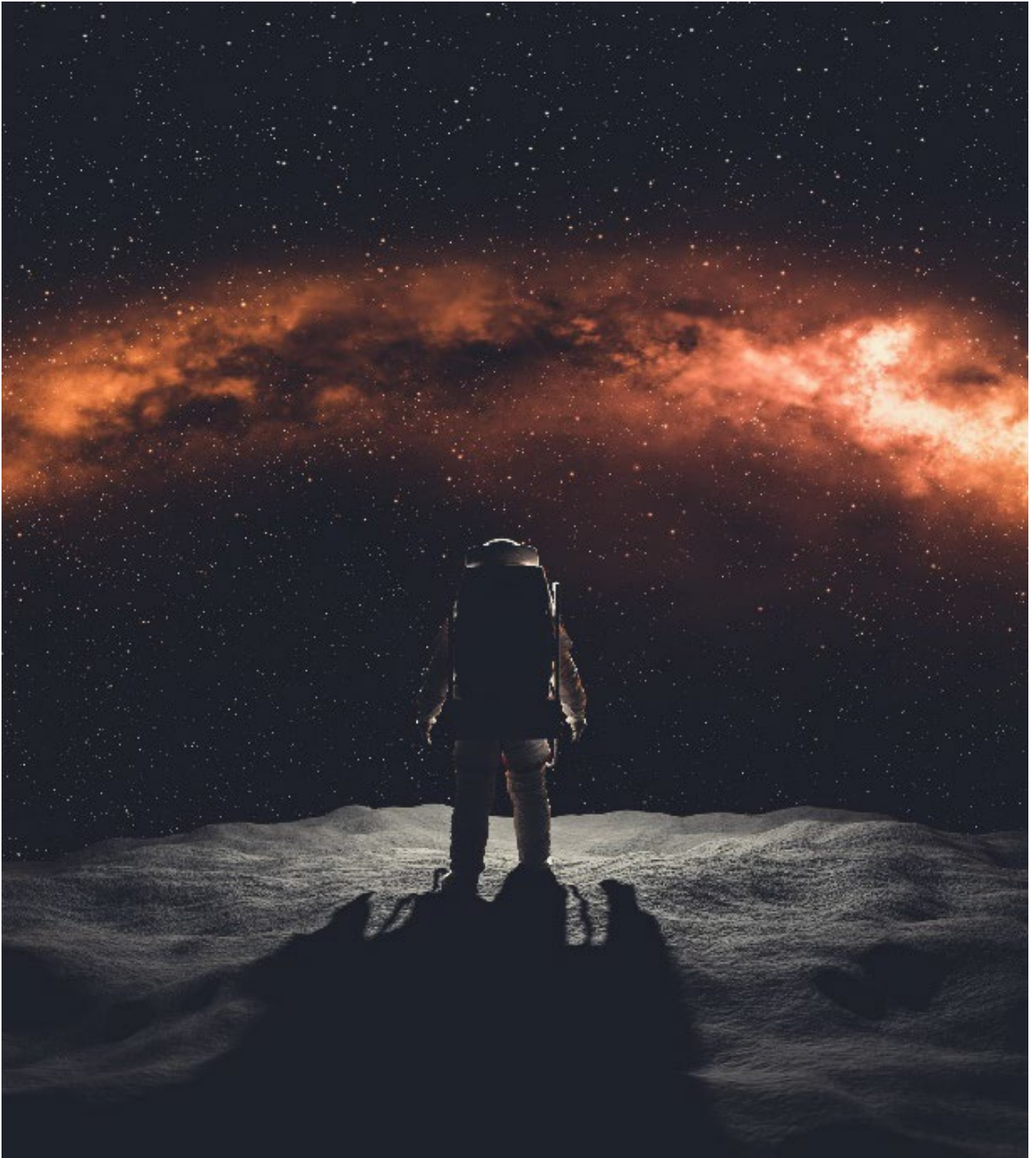
¹⁵⁸ The number of Space Start-Ups have gone up, from just 1 in 2014 to 189 in 2023 as per DPIIT Start-Up India Portal, says Union Minister Dr Jitendra Singh, PIB, accessed in October 2024

¹⁵⁹ Shri Narayan Rane says the MSME sector played an important role in the success of Chandrayaan-3, PIB, accessed in October 2024

1.8.3 Way forward

The growth of the Indian space sector is enabled by strengthening public-private collaborations and expanding international alliances along with commitment to innovation. Adopting this multifaceted

strategy is imperative to secure India's prominence in the global space arena and catalysing domestic economic and technological progress.



1.9 Railway

The Indian railway sector has fast-tracked legacy infrastructure into high-speed, to ensure impressive transformation and sustainable growth

The railway industry in India plays an instrumental role in fuelling the country's socio-economic development, connecting diverse geographical terrains and enabling economic integration. As one of the largest employers in the

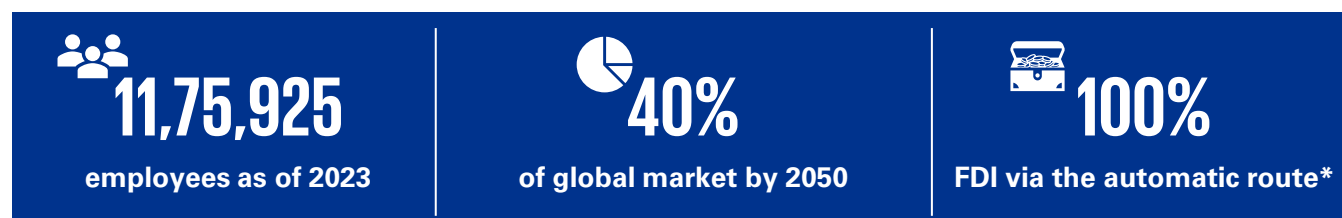
country and among the largest railway networks in the world, the railway sector is vital to the country's thriving freight and passenger transportation system.

The railway sector is adopting sustainable practices by electrifying tracks and utilising renewable energy, alongside developing energy-efficient trains, such as hydrogen and battery-powered models, to cut carbon emissions and boost sustainability.

Public-private partnerships (PPPs) are increasingly prevalent in the railway industry, fostering both investment and innovation. By distributing the financial load of extensive infrastructure projects, PPPs leverage private sector efficiency and expertise.

Governments and private entities are investing heavily in modernising railway infrastructure. This includes upgrading tracks, signalling systems and stations, as well as developing new freight corridors and logistics hubs.

The Indian railway sector: Powering ahead on global rank with robust expansion and innovation



Source: IBEF, Ministry of Railways; Note: *For railway infrastructure segment

1.9.1 Central government-led key incentives, policies and initiatives to enable the sector

Public-private partnership (PPP) initiative: The Ministry of Railways has launched this initiative to boost **private participation**, inviting partners **to introduce modern rakes on selected routes**. This move aims to offer world-class services to passengers. The Railway Development Authority is leading the renovation of 60 railway stations¹⁶⁰ across India by leveraging the PPP model.¹⁶¹

Automobile Freight Train Operator Scheme (AFTO): The AFTO incentivises private investment in special wagons for automobile transport, fostering the development of automobile hubs. By offering benefits, such as **market-driven pricing and demurrage exemptions**, AFTO enhances rail's appeal for automobile logistics, modernising and expanding the railway sector's role in India's automotive distribution network.¹⁶²

Initiatives to achieve self-reliance in railway component manufacturing: To promote the Make in India initiative, the government plans to boost local manufacturing of key components for the Vande Bharat trains and Linke Hofmann Busch (LHB) train sets by offering output-linked incentives to manufacturers, thereby promoting self-sufficiency in the railway sector.¹⁶³

Capital outlay by the government

PM Gati Shakti Multi-Modal Cargo: Under the Gati Shakti initiative, in 2022, the Indian government has set a target to **establish 100 Gati Shakti Multi-Modal Cargo Terminals (GCTs) by the end of the FY2024–2025**.¹⁶⁴ This aims to enhance the integration of different modes of transport, promoting efficiency and reducing logistics cost.¹⁶⁵

¹⁶⁰ Ministry of Railways, Shri Piyush Goyal reviews the progress of Redevelopment of Railway Stations, accessed in October 2024

¹⁶¹ PPP Initiatives in Indian Railway to boost Infrastructure, PIB, accessed in October 2024

¹⁶² Railways' Policy on Automobile Freight Train Operator Scheme, PIB, accessed in October 2024

¹⁶³ Make in India: Railways, PIB, accessed in October 2024

¹⁶⁴ Gati Shakti Cargo Terminals, PIB, accessed in October 2024

¹⁶⁵ PM Gati Shakti Multi-Modal Cargo, Government of India, accessed in October 2024

Amrit Bharat Station Scheme: The Amrit Bharat Station Scheme is a government initiative aimed at transforming **1,275 railway stations across India**. Currently, the government has **laid the foundation of 508 Amrit Bharat stations across 27 states with a capital of ~USD3 billion**. The comprehensive plan focuses on enhancing station facilities, cleanliness and passenger accessibility, including facilities for those with disabilities. The plan includes the **'One Station One Product' initiative** to set up kiosks showcasing local products, further fuelling local economies. The goal is to transform identified stations into vibrant city centres, augmenting societal and economic impact.¹⁶⁶

Strategic investments powering the future of Indian railways: FDI inflows related to railway components amounted to **USD1.4 billion**, spanning from April 2000 to December 2023.¹⁶⁷

The government permitted **100 per cent FDI via automatic route** in the sector, **applicable to areas such as operation and maintenance of suburban corridor projects through**

PPPs.

- In July 2020, as an initiative to enhance investment and attract FDI in the sector, the Ministry of Railways established the Project Development Cell (PDC) to generate turnkey projects with full approvals and detailed project reports for investor adoption. The PDC also identifies and escalates any pertinent issues to the Empowered Group to attract and finalise investment deals.

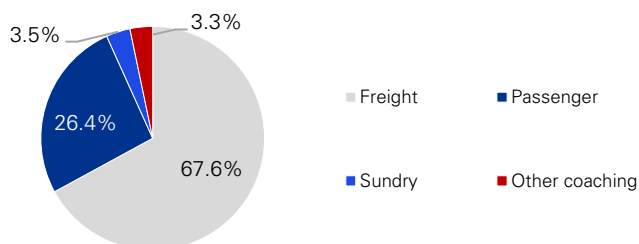
Government support and initiatives to the sector: During 2019–2023, GoI allocated USD1.4 trillion, including a potential investment **reserved for railway infrastructure amounting to over USD750 billion by 2030**.¹⁶⁸ **The Union Budget 2024-25 allocated a capital expenditure for Indian Railways amounting to INR2,62,200 crore** (~USD31 billion), with a gross budgetary support of INR2.5 lakh crore (~USD30 billion).¹⁶⁹ Along with these funds, the government aims to enhance efficiency via dedicated tracks for coal and mineral transport, better port links and solutions for congestion.

1.9.2 Key trends driving the sector

During FY24, the **Indian Railways generated a total income of INR2.6 lakh crore** (USD28.7 billion). Within the same duration, the Indian Railways achieved a total track extension of 5,100 km.¹⁷⁰

- The revenue for Indian Railways is driven majorly by two streams, with freight being the largest contributor **accounting for INR1.8 lakh crore** (USD21.8 billion).¹⁷⁰
- The **passenger earnings are estimated at INR70,000 crore** (USD8.5 billion), demonstrating a growth rate of 9

Revenue breakdown by segment (FY23)



Source: IBEF, Invest India

Railway strives to boost MSME participation: Indian Railways is actively supporting India's vital MSME sector by rolling out initiatives aimed at reducing costs, improving logistics and encouraging growth. These measures include lowering the fees for safety item approvals and enhancing supply chain efficiency, directly benefiting small and medium-sized businesses and bolstering their market potential.

Indian Railways **lowered the vendor application fee** for Research Design and Standards Organisation (RDSO) approval on safety items—from INR1.5 lakh (USD1,790) to INR10,000 (USD120) —**specifically to support MSMEs**.¹⁷¹

per cent compared to the FY2022–2023.¹⁶⁸

India's exports of railway transport and components were valued at approximately USD338 million during FY24.¹⁷⁰

The sector is witnessing widespread transformation to revolutionise operations, productivity and passenger experience.

Solar panels on the rooftop of narrow-gauge trains.

100 PM Gati Shakti Cargo terminals to be developed during the next three years

Light aluminum coaches to reduce the traveling time between metropolises

400 Vande Bharat (semi-high speed) trains to be manufactured during the next three years

Gauge conversion of 2,200 kms by 2023 at a cost of USD2 billion annually

Construction of six **dedicated freight corridors** by 2024

This decision aims to lower costs, encourage domestic production and enhance the sector's supply chain efficiency.

- The Indian Railways' Dedicated Freight Corridor (DFC) project, extending over a 2,800 km route, is positioned to substantially bolster the MSME market.¹⁷²
- The Joint Parcel Product (JPP), an initiative in collaboration with India Post, aims to create a comprehensive and efficient logistics chain and enhance the business potential of MSMEs, targeting the business-to-customer (B2C) and business-to-business (B2B) markets, with a focus on e-commerce and MSME segments.

166 Amrit Bharat Station Scheme, Government of India, accessed in October 2024

167 Indian Railways Industry Analysis, IBEF, accessed in October 2024

168 Indian Railways Industry, IBEF, accessed in October 2024

269 Indian Railways 2024: Major Investments, Enhanced Safety, and Modernization to Drive Future Growth, PIB, accessed in October 2024

170 Ministry of Commerce and Industry (HSN codes: 8605, 7302, 73089030, 73201012, 73209010, 84145140, 8530, 8604, 8603, 8607, 8608, accessed in October 2024

171 Special provision of lower fee is kept to encourage MSMEs, Ministry of Railways, all accessed in October 2024

172 Indian Railways successfully completes work on the Valsad Road Over Bridge (ROB) on Dedicated Freight Corridor in a record 20 day time, PIB, accessed in October 2024

1.9.3 Way forward

The National Rail Plan outlines a vision for expanding the railway network's capacity by 2030 to cater to future growth and aims to **increase the freight modal share to 40–45 per cent** from the current 26–27 per cent.¹⁷³ This expansion strategy, focused on completing highly critical projects, is crucial for enhancing the railway's capacity and ensuring it meets the increasing demands for passenger and freight services efficiently and sustainably. Indian Railways aim to add more **Vande Bharat** train sets and new wagons by 2030.

Over the next decade, the railway sector is set to witness a significant increase in capital expenditure, with the strategic aim to accelerate capacity growth and surpass demand by 2030. This could mark a significant increase from previous years, with the capital expenditure for 2021–2022 reaching over five times the amount in 2014, positioning the railway as a key driver of national growth.

¹⁷³ National Rail Plan Vision – 2030, Ministry of Railways, accessed in October 2024

Chapter 2

Assessing FDI potential in India and top 10 states by GDP, insights on state-led policies and investment in state infrastructure



The chapter details FDI inflows across key states and sectors, underscoring the strategic initiatives and policies covered in the earlier section. The fusion of state and central efforts in creating a conducive business environment is evident in offering an array of opportunities for investment and collaboration.

India's states are vital to the nation's economic vibrancy, with each state contributing uniquely to the broader growth narrative. This chapter provides an overview of state-specific investment attraction, policy-level support for different sectors and infrastructure enhancements that collectively drive national growth. With a spotlight on special economic zones (SEZs), industrial corridors and sector-specific incentives, the chapter outlines the role of localised strategies in shaping India's investment landscape.

State contributions are instrumental in making India an attractive destination for global investors. Cooperative federalism has also provided space to establish strong industrial bases and investor-friendly policies across states as each state leverages its unique strengths to attract investments. The strategic focus on infrastructure development, sector-specific incentives and enhancing ease of doing business highlights India's holistic approach to economic growth.

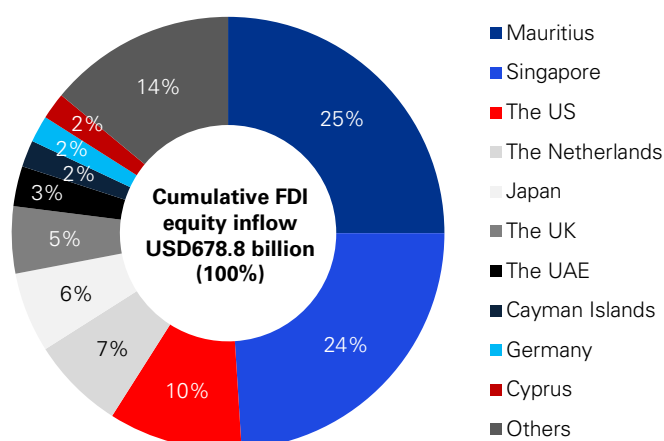
Chapter 2-A: Assessing FDI potential in India

India's economic landscape has been favourable for FDI in the past decade, with its vast market potential, diverse economy and increasingly facilitative policy environment. Over the past 24 years, from April 2000 to March 2024, the country has received USD678.8 billion in FDI equity inflow. In FY24, India witnessed FDI inflow amounting to USD44.4 billion. Majority of the sectors are approved under the automatic route, where the approval for FDI is granted without the need for prior clearance, significantly improving the investment climate in the country. Some of these sectors include automobiles, chemicals, electronic systems, IT and BPM, renewable energy, ports and shipping, among others.

From April 2000 to March 2024, the services sector attracted the highest FDI equity inflows in India, which encompasses key sub-sectors, such as finance, banking, insurance, non-financial/business, outsourcing, R&D and technical testing and analysis, with 16 per cent share. This was closely followed by the computer software and hardware sector, which secured 15 per cent of the equity inflows.¹⁷⁴

FDI equity inflows in India

Share of top investing countries (April 2000-March 2024)



Source: DPIIT

FDI inflows across different sectors of the Indian economy

Sector attracting highest FDI equity inflow	Cumulative FDI inflow (April 2000 – March 2024, USD billion)	FDI inflows in past five years (April 2019 – March 2024, USD billion)	FDI inflows in FY24 (USD billion)
Services sector	109.5	35.3	6.6
Computer Software and Hardware	102.9	65.6	7.9
Trading	43.3	20.3	3.8
Telecommunication	39.3	6.5	0.3
Automobile	36.2	14.8	1.5
Construction (Infrastructure activities)	33.9	19.1	4.2
Construction development	26.6	1.5	0.3
Drugs and pharmaceuticals	22.5	6.5	1.0
Chemicals (other than fertiliser)	22.1	5.5	0.8
Power	18.2	2.9	1.7

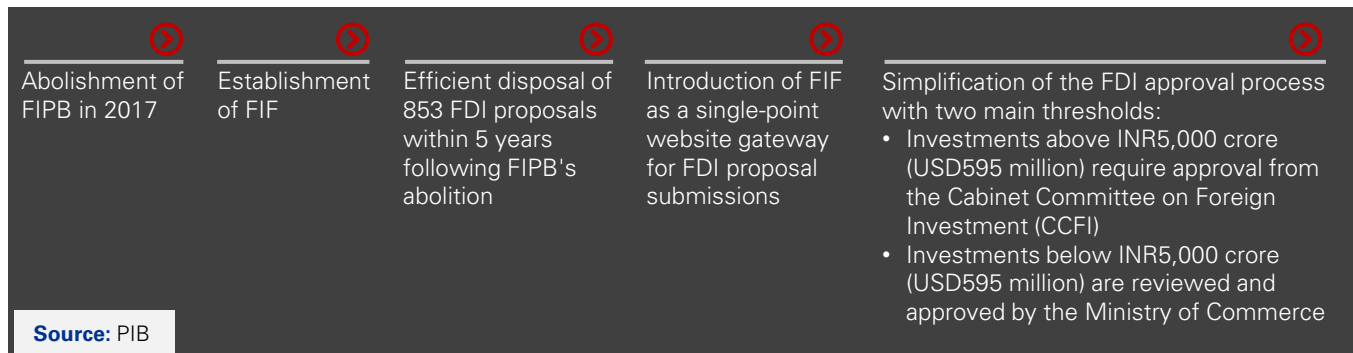
Source: DPIIT

174 Fact Sheet On Foreign Direct Investment (FDI) Inflow From April, 2000 To March, 2024, DPIIT, accessed in October 2024

Streamlining FDI management process: Removal of FIPB and introduction of FIF

The abolition of the Foreign Investment Promotion Board (FIPB) and the establishment of the Foreign Investment Facilitation Portal (FIF) in 2017 have streamlined India's FDI management, efficiently processing numerous proposals. This reformation introduced a simpler, two-tiered approval

process, significantly enhancing the efficiency and transparency of foreign investments in India. FIF operates as an inter-ministerial group with authority under the Foreign Exchange Management Act (FEMA) regulations.¹⁷⁵



Chapter 2-B: State-led contributions and global investment prospects

From tech hubs to industrial leaders, leading Indian states cultivate growth, enable diversity and drive innovation to offer progress and opportunity across the economy

2.1 FDI attraction, economic aspirations and contribution towards national growth across states

India is one of the fastest growing major economies in the world and has registered a GDP growth over 8 per cent in FY2023–2024. This impressive growth can be attributed to stable consumption demand and the continuous improvements in the investment environment.¹⁷⁶

Maharashtra, Tamil Nadu, Gujarat, Uttar Pradesh and Karnataka are the five largest states in terms of highest GDP contribution to the Indian economy.¹⁷⁷

State level GDP in FY24 (values in USD billion)



Source: NITI Aayog, IBEF

Note: For this report, we focused our analysis on the top ten states in India based on GDP, using the most recent data from the RBI and Economic Survey of India. It is important to note that this list is not exhaustive and may not encompass all states with investment potential across India.

¹⁷⁵ Foreign Investment Facilitation Portal (FIF) completes 5 years since Union Cabinet decision to abolish FIPB, PIB, accessed in October 2024

¹⁷⁶ About Indian Economy Growth Rate & Statistics, IBEF, accessed in October 2024

¹⁷⁷ State-level GDP figures, NITI Aayog and IBEF, accessed in October 2024

Macro-level view of top 10 states' economies

Maharashtra is the **largest state in terms of GDP** owing to its strong industrial base and a favourable business environment. **To support India's ambition of becoming a USD5 trillion economy, Maharashtra** has decided to take an aspirational **target** to become a **USD1 trillion economy by FY28. It is home to the country's financial capital, Mumbai, and has a diverse industrial base, with representation from all major industry sectors.**¹⁷⁸

Tamil Nadu is the **second largest contributor to the nation's economy**, driven by the state's skilled workforce and developed manufacturing ecosystem. The state has set an ambitious target to become a **USD1 trillion economy by 2030**, enabled by regional macroeconomic stability and the policies of the central government. Tamil Nadu ranks first among Indian states in factory count and industrial workforce. The state serves as a hub for diverse sectors, such as electronics, automobiles, food processing, textiles, footwear and leather.¹⁷⁹

Gujarat, the third largest contributor to the nation's economy, is **one of the most industrially developed states**, marking significant strides in economic and industrial growth. The state has also set a target of becoming a **USD1 trillion economy by 2030**. The economic growth and its standing as an investment powerhouse can be attributed to state and central government policies that promote industrial development and enable infrastructure to support global trade. Gujarat International Finance Tec-City (GIFT City) is India's first operational International Financial Services Centre (IFSC), aiming to complement global financial hubs with its state-of-the-art infrastructure, sustainability focus, innovative urban solutions along with a regulatory-friendly environment.¹⁸⁰

Uttar Pradesh, India's most populous state, is one of the leading economies in the country. **UP contributes 9 per cent of total MSMEs in India. The state government supports MSMEs with initiatives** including a **50 per cent interest subsidy** for micro units, an annual infrastructure **interest subsidy up to 50 per cent for approved projects with 10 acres or more** and a **100 per cent stamp duty exemption** in select regions.¹⁸¹

Karnataka is home to over **5,500 IT/ITES companies**, primarily concentrated in the capital city, Bengaluru, which is also known as the Silicon Valley of India. The services sector is the major contributor to state's GDP contributing to two-third of the economy. The state aims to achieve a **GDP of USD1 trillion by 2032**, supported by its Nava Karnataka initiative.¹⁸²

Andhra Pradesh state GDP is estimated at USD171.4 billion at current prices for FY24 compared to ~USD159.5 billion in FY23. The surge in Andhra Pradesh's economy is largely fuelled by the agriculture and allied sector, which recorded a gross value added (GVA) growth of 20.7 per cent in FY23. This is complemented by significant contributions from the manufacturing (11.2 per cent) and industrial sectors (16.4 per cent), further underlining the state's dynamic economic landscape.¹⁸³

Telangana is the youngest state in the country in terms of formation and was carved out of Andhra Pradesh around a decade ago. The services sector is the primary contributor to the economic growth of the state, witnessing a growth of 19.4 per cent in its GVA, accounting for 66.8 per cent of the state GSVA in FY23.¹⁸⁴

Rajasthan is the **largest state in India by area**. It serves as a vital corridor connecting the northern regions with the western states, establishing it as a key hub for trade and commerce. The state is known for its conducive industrial climate, rich natural resources, complemented by a law framework that ensures a favourable working environment.¹⁸⁵

Madhya Pradesh stands as the **second-largest state in terms of area** and ranks among the fastest-growing states. This advancement is propelled by diverse sectors, such as agriculture, industry and services, marking a balanced and strong economic trajectory. The state recorded GDP growth of 9.4 per cent in FY24.¹⁸⁶

West Bengal is a state is rich in natural resources¹⁸⁷, including a variety of minerals and boasts of favourable agricultural, horticultural and fisheries conditions due to its suitable agro-climatic zones.¹⁸⁸

178 'Maharashtra Economic Advisory Council 2023', MAHASDB, 10 July 2023, accessed in October 2024

179 Tamil Nadu Vision - \$1 trillion, Government of Tamil Nadu, accessed in October 2024

180 Gujarat, IBEF, accessed in October 2024

181 'Why Uttar Pradesh is the next growth engine for India?', Invest India, accessed in October 2024

182 'Economic Survey of Karnataka 2023-24', Government of India, accessed in October 2024

183 Andhra Pradesh, IBEF, accessed in October 2024

184 Telangana Economy, Government of Telangana, accessed in October 2024

185 Rajasthan, IBEF, accessed in October 2024

186 Madhya Pradesh, Invest India, Economic survey of Madhya Pradesh, accessed in October 2024

187 Mining Industry, Government of West Bengal, accessed in October 2024

188 West Bengal, IBEF, accessed in October

FDI inflows and investment opportunities in select states

From October 2019–March 2024, **Maharashtra, Karnataka and Gujarat were the top three states for FDI inflow** receiving USD69.1 billion, USD51 billion and USD39.2 billion, respectively.

Maharashtra has created an optimal ease of doing business environment for companies by offering single-window clearance for 44 industry-related approvals across 16 departments, implementing land reforms and other incentives. **Currently, there is an investment opportunity of USD233.4 billion within 1,090 government projects and 17 private projects across the state.**¹⁸⁹ The state's **cumulative FDI inflow stood at USD69.1 billion** during October 2019–March 2024.¹⁷⁴

Tamil Nadu ports within the state are currently experiencing modernisation and expansion; notably, two major Green Field ports are in the planning stages, presenting distinct opportunities for investors. The state boasts 1,200 opportunities valued at USD219 billion across diverse sectors, including roads and highways, waste and water, real estate and inland waterways.¹⁹⁰ The state's **cumulative FDI inflow stood at USD10.9 billion** between October 2019 and March 2024.¹⁷⁴

Gujarat's investor-friendly policies, robust industrial infrastructure and continuous improvements in the ease of doing business, including single window clearance and dedicated investor facilitation agency helping entrepreneurs to set up business, have increasingly attracted FDI. **Key industrial zones such as GIFT City, Sanand GIDC and special investment regions in Dholera and Mandal-Bechraji have played a crucial role in attracting foreign investors.** Sector-specific policies in renewable energy, semiconductor manufacturing and IT have further strengthened the investment climate in Gujarat. The state's **cumulative FDI inflow stood at USD39.2 billion** between October 2019 and March 2024.¹⁷⁴

Uttar Pradesh is committed to attracting investments and creating employment opportunities. It has undertaken multiple infrastructure projects, embraced the PPP model and hosted international events, such as the **Global Investors Summit, International Trade Show and Moto GP**, all boosting economic growth. To further its economic growth plan, projects worth USD119.8 billion were inaugurated during the UP Global Investors Summit 2023 with 14,000 projects launched across various sectors.¹⁹¹ The state government has finalised over 150 defence manufacturing deals worth INR25,000 crore (USD3 billion) in 2024, positioned strategically within the UP Defence Industrial Corridor (UPDIC) across Lucknow, Kanpur, Jhansi, Aligarh, Chitrakoot and Agra, expected to create 40,000 new jobs.¹⁹² The state's **cumulative FDI inflow stood at USD1.6 billion** between October 2019 and March 2024.¹⁷⁴

Karnataka is developing essential infrastructure, such as technical institutions, laboratories and research centres, while formulating policies to attract investors. The state provides **a single-window system for investor facilitation**, bolstered by stable industrial growth, a dependable law and order situation, skilled workforce and logistical connectivity to attract investments. To further its economic growth plan, the state foresees a cumulative investment of **USD1.8 trillion by 2034.**¹⁹³ The state's **cumulative FDI inflow stood at USD51 billion** between October 2019 and March 2024.¹⁷⁴

Andhra Pradesh's state government allocated **USD1.1 billion for urban development in FY23.** Within this budget, **USD131.1 million was dedicated to the Smart Cities Mission**, and USD104.9 million was allocated to establish vital infrastructure in the new capital city, Amaravati.¹⁹⁴ The state's **cumulative FDI inflow stood at USD0.8 billion** between October 2019 and March 2024.¹⁷⁴

Telangana has implemented several initiatives to attract investments. This includes the **TG-iPASS system for speedy approvals, T-IDEA scheme offering incentives and T-PRIDE programme** providing special incentives to SC/ST entrepreneurs. These initiatives have led to significant investment approvals and employment opportunities in the state. The state's **cumulative FDI inflow stood at USD7.8 billion** between October 2019 and March 2024.¹⁷⁴

Rajasthan with its rich cultural heritage and strategic geographic location, has emerged as an attractive destination for FDI. The state's vibrant economy, propelled by its diverse sectors ranging from textiles to minerals and its commitment to creating an investor-friendly environment, have played pivotal roles in drawing FDI inflows and expanding its export footprint globally. The state's **cumulative FDI inflow stood at USD2.3 billion** between October 2019 and March 2024.¹⁷⁴

Madhya Pradesh secured investments worth USD184 billion in FY23 during the Global Investor Summit.¹⁹⁵ The **Invest Madhya Pradesh** session highlighted Madhya Pradesh as a favourable investment destination. The event resulted in the signing of **multiple MoUs and investment proposals**, boosting job creation in the state's key sectors and regions. The state's **cumulative FDI inflow stood at USD0.5 billion** between October 2019 and March 2024.¹⁷⁴

West Bengal contributes ~1 per cent of the total FDI inflows to the country.¹⁹⁶ **The State Investment Facilitation Centre (SIFC) operates as the nodal agency in West Bengal for single-window clearances.** Its primary objective is to offer guidance and information to investors regarding the state's policies and programmes. The state's **cumulative FDI inflow stood at USD1.6 billion** between October 2019 and March 2024.¹⁷⁴

189 Maharashtra, Invest India, accessed in October 2024

190 Tamil Nadu, India Investment Grid, accessed in October 2024

191 Launches 14000 projects across Uttar Pradesh worth more than Rs 10 lakh crores at the fourth groundbreaking ceremony of UP Global Investors Summit 2023, PIB, accessed in October 2024

192 Uttar Pradesh govt inks over 154 defence deals, Invest UP, accessed in October 2024

193 Karnataka vision for 2030, Government of Karnataka, accessed in October 2024

194 Andhra Pradesh, IBEF, accessed in October 2024

195 Madhya Pradesh gets investments of INR 15,42550 cr, Invest India, accessed in October 2024

196 West Bengal state report, IBEF, accessed in October 2024

2.2 Additional state-led initiatives and policies to promote the growth of different sectors of the state economy

State	Primary sector-specific initiatives	Secondary and Tertiary sector-specific initiatives	
Maharashtra	The State Government of Maharashtra is dedicated to promoting fisheries and bamboo production. As part of this initiative, farmers will receive a financial incentive of USD2 per plant for bamboo plantation. ¹⁹⁷	The 2019 Package Scheme of Incentives (PSI) prioritises several industries, such as EV, IT, ITeS, ESDM, semiconductor fabrication, logistics and warehousing. ¹⁹⁸	The Maharashtra Tourism Policy 2024 aims to make the state a leading tourist destination. It allocates USD0.2 billion annually for incentives and targets USD12 billion in private sector investment. ¹⁹⁹
Tamil Nadu	The Mannuyir Kaathu Mannuyir Kaappom scheme, with an investment of USD24.5 million, highlights the crucial shift towards adopting sustainable and chemical-free farming. ²⁰⁰	The Tamil Nadu Industrial Policy of 2021 offers a unique incentive package for emerging sectors. This includes renewable energy components manufacturing, ESDM, EVs and pharmaceuticals. ²⁰¹	The Tamil Nadu Ethanol Blending Policy 2023 aims to boost indigenous production of fuel-grade ethanol, enhance energy security, and has set a goal to attract INR5,000 crore investment. ²⁰²
Gujarat	To advance sustainable agriculture, the Gujarat government has launched a scheme that provides a 50 per cent subsidy on Nano Urea and Nano DAP. The goal is to motivate farmers to adopt these novel fertilisers. ²⁰³	The Aatmanirbhar Gujarat Scheme 2022 offers aid to MSMEs and large businesses. The scheme provides specific emphasis on promoting certain thrust sectors, such as green energy, mobility (including auto and EV) and pharmaceuticals. ²⁰⁴	The New Gujarat Industrial Policy 2020 aims to propel the state towards self-reliance with a focus on inclusive growth, technological advancement and sustainability. It offers up to 12 per cent capital subsidy and incentives for environmental and technological upgrades. ²⁰⁵
Uttar Pradesh	Under the Food Processing Industry Policy 2023, the state provides subsidies and exemptions on investments in plant infrastructure or land purchases for food processing. ²⁰⁶	The 2022 UP Industrial Investment and Employment Promotion Policy prioritises sectors across the state's economy. ²⁰⁷	The UP Pharmaceutical & Medical Device Industry Policy 2023 offers incentives to promote growth, including a 15 per cent capital subsidy up to INR200 crore (USD23 million) over five years. ²⁰⁸
Karnataka	The Krishi Bhagya Yojana aims to revolutionise rainfed agriculture by enhancing farm incomes and promoting sustainable agriculture through the construction of farm ponds. ²⁰⁹	The government has launched the New Industrial Policy 2020–2025 which provides benefits such as capital investment subsidies, stamp duty refunds, power tariff reductions and production-linked incentives, offering up to USD1.2 million in incentives. ²¹⁰	The Karnataka Tourism Policy 2020-2026 aims to make Karnataka a leading tourist destination. ²¹¹

197 Maharashtra Atal Bamboo Samruddhi Yojana, Government of Maharashtra, accessed in October 2024

198 Package Scheme of Incentives – 2019, Government of Maharashtra, accessed in October 2024

199 Tourism Policy of Maharashtra 2024, Maharashtra Tourism, accessed in October 2024

200 Scheme List 2022-23, Department of Agriculture and Farmers Welfare, Government of Tamil Nadu, accessed in October 2024

201 Industrial Policy, Invest in Tamil Nadu, accessed in October 2024

202 Tamil Nadu Ethanol Blending Policy 2023, Invest in Tamil Nadu, accessed in October 2024

203 Standing Committee on Chemicals & Fertilizers, Lok Sabha Secretariat, accessed in October 2024

204 Aatmanirbhar Gujarat Scheme - Industries Commissionerate, Government of Gujarat, accessed in October 2024

205 Gujarat Industrial Policy 2020- Industries Commissionerate, Government of Gujarat, accessed in October 2024

206 Uttar Pradesh Food Processing Industry Policy 2023, Invest UP, accessed in October 2024

207 Uttar Pradesh Industrial Investment & Employment Promotion Policy 2022, Invest UP, accessed in October 2024

208 UP Pharmaceutical and Medical Device Policy, 2023, Invest UP, accessed in October 2024

209 Krishi Bhagya Scheme, Raitamitra- Government of Karnataka, accessed in October 2024

210 Karnataka Industrial Policy 2020-25, Government of Karnataka, accessed in October 2024

211 Karnataka Tourism Policy 2020-26, Karnataka Tourism, accessed in October 2024

State	Primary sector-specific initiatives	Secondary and Tertiary sector-specific initiatives	
Andhra Pradesh	Launched in 2016, the Andhra Pradesh Community Managed Natural Farming (APCNF) programme supports smallholder farmers. ²¹²	The Andhra Pradesh Industrial Incentive Scheme offers comprehensive incentives to new and expanding industrial units, including multiple subsidies. ²¹³	The Andhra Pradesh MSME & Entrepreneur Development Policy 4.0 (2024-29) aims to spur MSME growth and promote self-reliance. ²¹⁴
Telangana	Telangana government launched the second phase of the Crop Loan Waiver Scheme 2024. The government has released USD738 million to waive loans of over 6.5 lakh farmers. ²¹⁵	The 2014 Industrial Policy Framework for Telangana aims to drive economic growth and employment through innovation, technology and entrepreneurship. ²¹⁶	The Telangana Innovation Policy 2016 aims to make the state a global innovation hub by fostering a conducive environment for start-ups and entrepreneurship. ²¹⁷
Rajasthan	The Mukhyamantri Kisan Mitra Urja Yojana, launched in 2021, aims to provide financial assistance to farmers in Rajasthan for their electricity bills. ²¹⁸	The Rajasthan Investment Promotion Scheme 2022 provides incentives across defined focus categories, including manufacturing, services, sunrise sectors, MSMEs and start-ups, among others. ²¹⁹	The Rajasthan Eco Tourism Policy 2021 aims to promote sustainable tourism by utilising the state's ecological and cultural resources. ²²⁰
Madhya Pradesh	The Millet Mission Scheme, launched in 2023–2024, aims to expand the cultivation, yield and productivity of millets. ²²¹	The Madhya Pradesh Startup Policy and Implementation Scheme 2022, amended in June 2023, aims to foster a vibrant start-up ecosystem. ²²²	Madhya Pradesh Cloud Policy-2024 aims to centralise cloud service procurement through Madhya Pradesh State Electronics Development Corporation (MPSEDC). ²²³
West Bengal	In FY24, under the 'Bangla Krishi Sech Yojana (BKSY)' in collaboration with the 'Per Drop More Crop' initiative, 12,860 hectares of farmland have been equipped with micro-irrigation systems. ²²⁴	The West Bengal Ethanol Production Promotion Policy 2021 to promote ethanol manufacturing units in the state. ²²⁵	The West Bengal Sand Mining Policy 2021 aims to regulate sand mining with a focus on environmental sustainability, equitable distribution and reducing dependency on imported sand. ²²⁶

212 Andhra Pradesh Community Managed Natural Farming, APCNF, accessed in October 2024

213 New Andhra Pradesh Industrial Development Policy, Andhra Pradesh Government, accessed in October 2024

214 Andhra Pradesh MSME & Entrepreneur Development Policy, Andhra Pradesh Government, accessed in October 2024

215 TG Government waives Rs 12000 crore farm loans in 12 days, Telangana State Government, accessed in October 2024

216 State Industrial Policy, Telangana State Government, accessed in October 2024

217 Telangana-Innovation-Policy, Invest in Telangana, accessed in October 2024

218 Mukhyamantri Kisan Mitra Urja Yojana, Government of Rajasthan, accessed in October 2024

219 Rajasthan Investment Promotion Scheme 2022, Government of Rajasthan, accessed in October 2024

220 Rajasthan Ecotourism Policy 2021, Government of Rajasthan, accessed in October 2024

221 Madhya Pradesh The Millet Mission Scheme, MP Planning Commission, accessed in October 2024

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223 Madhya Pradesh Cloud Policy-2024, Government of Madhya Pradesh, accessed in October 2024

224 Bangla Krishi Sech Yojana (BKSY), Government of West Bengal, accessed in October 2024

225 West Bengal Ethanol Production Promotion Policy, 2021, West Bengal Industrial Development Corporation, accessed in October 2024

226 West Bengal Sand Mining Policy 2021, Government of West Bengal, accessed in October 2024

2.3 State infrastructure as an enabler of investments into the regional economy

India's economic growth is propelled by strategic state infrastructure upgrades, vital for attracting investments. Regions across the country are enhancing their physical, social and industrial assets to support and elevate key sectors. This includes the development of transportation networks, modernisation of airports, port expansions and the establishment of SEZs, as well as fostering a vibrant start-up ecosystem.

The National Highways Authority of India (NHAI) has significantly boosted capital expenditure in the last five years, leading to an expansion of the National Highways network from about 91,287 km in 2014 to approximately 146,126 km in 2024. The Bharatmala Pariyojana initiative has been pivotal in this growth, covering developments across various sectors, such as economic corridors, inter-corridor and feeder routes and expressways. As a result, 26,425 km of roads were awarded and 17,411 km were constructed by March 2024, incurring an expenditure of INR4.59 lakh crore (USD54.6 billion).²²⁷

Gol has launched the Humsafar Policy in October 2024, designed to revolutionise India's highway network. It is an initiative aimed to improve the infrastructure of the national highways by providing essential facilities to enhance the commuter's travel experience. The policy emphasises accessibility with specific provisions for differently abled travelers and infrastructure for the emergent electric vehicles market. The policy's goal is to modernise the national highway system and elevate it to international standards.²²⁸

Infrastructure development in the port sector, involving construction of new structures, mechanisation, dredging and improved connectivity, has steadily increased the cargo-handling capacity of major ports to 1,617 MTPA as of March 2023.²²⁹ Under the PM Gati Shakti initiative, a comprehensive port connectivity plan (CPCP) was prepared, detailing 298 connectivity projects aimed at enhancing port efficiency and cargo handling by improving last-mile and hinterland connectivity.²³⁰

The government is dedicated to enhancing transportation infrastructure through comprehensive renovation projects aimed at improving existing railway stations and their facilities. New airports are being constructed to expand air

connectivity, thereby enhancing the nation's overall transport network.

- Maharashtra:** Maharashtra has positioned itself as a pivotal centre for business activities, with established centres for the financial services and automotive industries. The state benefits from an advanced physical and industrial infrastructure. In addition to 16 airports, Maharashtra hosts two principal and 48 minor ports. Over the past decade, the infrastructure sector in Maharashtra has witnessed considerable growth, marked by a significant increase in industrial clusters and public-private partnership (PPP) initiatives.²³¹ In August 2024, the **foundation stone of Vadhvan Port, estimated at USD9 billion**, was laid in Palghar.²³²
- Tamil Nadu:** The state houses the largest number of SEZs in India, with 54 active SEZs contributing to one-third of the state's exports. The state features well-developed infrastructure including an exceptional network of roads and railways, three extensive ports, 23 smaller ports and seven airports that offer excellent connectivity throughout the state. There are also plans in place to develop two industrial corridors along with the development of two new airports in the state.²³³
- Gujarat:** The state boasts a coastline that stretches 1,600 km, making up one-fourth of India's waterfront. Forty minor ports of Gujarat, many privately owned, manage approximately 80 per cent of cargo processed by private ports across India. The state government has initiated a viability gap funding scheme, aiming to address the financial feasibility gap in infrastructure projects. The recent approval for a **new oil jetty at Deendayal Port, with a USD15.05 million investment**, underscores ongoing enhancements in its port infrastructure.²³⁴
- Uttar Pradesh:** The state features a robust social, physical and industrial framework, well-connected through 48 national highways, six airports and railway links to all prime cities. The transportation infrastructure is getting rapidly developed in the state with the operationalisation of six expressways and the proposal to build new ones. The state is developing an international airport in Jewar near Delhi National Capital Region, which is expected to be operational for trial by the end of 2024.²³⁵

227 Road and Infrastructure Industry Analysis, IBEF, accessed in October 2024

228 Humsafar Policy, PIB, accessed in October 2024

229 Cargo handling capacity of Major Ports of the country has gone up to 1617.39 Million Tonnes Per Annum (MTPA) as on March 2023, PIB, accessed in October 2024

230 Capacity of Major Ports, PIB, accessed in October 2024

231 Maharashtra, IBEF, accessed in October 2024

232 PM to visit Maharashtra on 30th August, PIB, accessed in October 2024

233 Tamil Nadu, IBEF, accessed in October 2024

234 Gujarat, IBEF, accessed in October 2024

235 Uttar Pradesh, Invest UP, accessed in October 2024

- **Karnataka:** Karnataka is equipped with five domestic airports, 13 ports and is connected with other parts of the country through well-developed railway system. The Beyond Bengaluru initiative, focusing on the development of new economic clusters in Belgavi and Mysuru, aims to decentralise IT and start-up growth beyond the capital city.²³⁶
- **Andhra Pradesh:** The development of the greenfield port at Ramayapatnam, designed with an artificial deep harbour, signifies a major step towards accommodating the growing cargo demand and enhancing the state's maritime capabilities.²³⁷
- **Telangana:** Telangana is well-connected to other parts of the country through the rail network and has two airports. In terms of land designated for industrial use, Telangana State Industrial Infrastructure Corporation (TSIIC) focuses on industrial parks in the state. The Hyderabad Metro Rail Project, one of the largest PPP projects within the metro sector worldwide, encompasses a comprehensive distance of approximately 72 kms across three main routes. The project has an estimated cost of INR14,132 crore (USD2 billion).²³⁸
- **Rajasthan:** The state of Rajasthan is covered by more than 20 national highways and is well connected with the rail network. In 2023, the Ministry of Railways announced Vande Bharat Express linking Jaipur and Delhi. Plans to introduce **Vande Metro trains connecting Jaipur with Dausa, Sikar and Phulera within the next two years** could further enhance the state's rail connectivity.²³⁹
- **Madhya Pradesh:** The state has inaugurated 15 highway projects with investments worth USD963 million, alongside an USD1 billion allocation for the enhancement of roads and bridges in the State Budget for 2023–2024.²⁴⁰
- **West Bengal:** The modernisation of the Netaji Subhash Chandra Bose International Airport in Kolkata at a cost of USD360 million is boosting its passenger capacity to 26 million per annum.²⁴¹

Current state of infrastructure development and emerging business ecosystem across states

	National highways (in kms)*	Total railway track length (in kms)*	Total number of airports	Total number of ports	Total number of SEZs*	Total number of start-ups*
Maharashtra	18,459	11,631	10	55	38	5,801
Tamil Nadu	7,000	6,836	7	18	51	2,810
Gujarat	8,099	7,938	20	41	21	3,291
Uttar Pradesh	12,292	16,001	21	0	14	3,426
Karnataka	8,191	6,083	8	11	37	3,032
West Bengal	8,901	10,309	5	4	7	1,170
Rajasthan	10,706	9,190	7	0	3	1,443
Andhra Pradesh	8,683	7,714	6	13	25	586
Telangana	9,226	3,223	1	0	38	1,757
Madhya Pradesh	9,105	9,702	5	0	6	1,264

*National Highways as of 2023, Total railway track length as of 2020, Total number of SEZs as of 2024, Total number of startups as of 2023.

Source: Government of India, Indian Railways Civil Engineering Portal, IBEF, SEZ India, PIB

236 Karnataka, IBEF, accessed in October 2024

237 Andhra Pradesh, IBEF, accessed in October 2024

238 Telangana, IBEF, accessed in October 2024

239 Rajasthan, IBEF, accessed in October 2024

240 Madhya Pradesh, IBEF, accessed in October 2024

241 West Bengal, IBEF, accessed in October 2024

Chapter 3

Gujarat International Finance Tec- City: Exploring the potential of GIFT City

Chapter 3: Gujarat International Finance Tec-City (GIFT City)

A global hub for financial services and investment supporting India's growth plans

The financial services sector is experiencing significant growth, driven by the swift adoption of fintech, supportive policies, digital innovation, expanded rural outreach and the active participation of high-net-worth individuals and family offices.

GIFT City significantly contributes to India's GDP and financial services sector. It has the potential to further boost GDP and create job opportunities as India strives to become a developed economy by 2047.



Source: Ministry of Statistics and Programme Implementation, GIFT City Gujarat

India's economy, exhibiting strong performance, surpassed growth projections for the first three fiscal quarters of 2024 — a momentum fuelled by **robust manufacturing, increased government expenditure and strong domestic consumption**, collectively steering the nation towards its ambitious USD5 trillion economy goal by FY25.²⁴²

GIFT City—Strategic hub for global finance and technology: The Gujarat International Finance Tec-City (GIFT City) stands as a significant component to Gujarat's growth trajectory, strategically positioned as a **global financial and technology hub**. This state-promoted **greenfield project** is set to catalyse the growth of the country's finance and technology sectors by offering a nurturing business environment supported by advanced infrastructure and favourable regulations. It houses a **multi-service SEZ** and a **domestic tariff area (DTA)** with the SEZ serving as an **International Financial Services Centre (IFSC)**, offering a free trade zone for global operations, while the DTA caters to

India-related businesses. Established in April 2020, the International Financial Services Centres Authority (IFSCA) serves as the **unified regulator for financial institutions, services and products**.

GIFT City's expansion and investment update: Significant regulatory approvals in 2024 have allowed foreign portfolio investors (FPIs) to issue offshore derivative instruments, granted non-resident Indians full ownership of global funds and enabled foreign funds at GIFT City to attract full investment from non-resident Indians and other individuals of Indian origin. The GIFT IFSC banks have **financed green credits of more than USD1.5 billion**²⁴³ and attracted over **USD20 billion in committed investment funds**, positioning itself as a pivotal channel for foreign capital.²⁴⁴ GIFT City is poised to attract more investments and has the potential to expand beyond the existing set up with government support and public-private collaboration.

²⁴² Vision of a USD 5 Trillion Indian Economy, PIB, accessed in October 2024

²⁴³ IFSCA Bulletin, Jul-Sep 2024, IFSCA, November 2024, accessed in November 2024

²⁴⁴ Invest in an unparalleled modern economic edge, GIFT City, accessed in October 2024

Conclusion

India's economic landscape is undergoing a transformation, driven by dynamic growth and strong government support in key sectors and emerging industries. This evolution presents substantial opportunities for investors. The government's focus on fostering a facilitative business environment through streamlined regulatory frameworks, ease of doing business initiatives and sector-specific incentives is crucial in attracting both domestic and foreign investments. With strategic policies, incentives and initiatives, the government has created a strong reformative framework for transformational growth for businesses and economy in the coming decades.

In summary, the report provides investors and stakeholders with an overview of the opportunities and highlights the seamless coordination between central and state government efforts to promote ease of doing business and sustainable economic growth in India.

India's progressive policies and reform-driven economy

provide a fertile ground for investors globally, promising substantial returns and long-term growth. The synergy of state and central policies, underpinned by strategic incentives and reforms, promises greater avenues for growth potential.

The focus on sustainable development, technological advancement and creating a conducive business environment aligns with India's vision of becoming a global manufacturing and innovation hub. The collaborative efforts of government bodies, financial institutions, private sector enterprises and international organisations have positioned India as a global investment destination.

With the government's continuous efforts to foster innovation, enhance ease of doing business and develop world-class infrastructure, India is well-poised to achieve its ambitious growth targets and establish itself as a growth partner for global investors.

List of abbreviations



Abbreviation	Full form
1H	First Half
3P	Third-Party
5G	Fifth Generation
ACC	Advanced Chemistry Cell
ADAS	Advanced Driver Assistance Systems
AFTO	Automobile Freight Train Operator Scheme
AI	Artificial Intelligence
AMP 2026	Automotive Mission Plan 2016–2026
APAC	Asia-Pacific
APCNF	Andhra Pradesh Community Managed Natural Farming
ATIRA	Ahmedabad Textile Industry's Research Association
ATMP	Assembly, Testing, Marking and Packaging
B2B	Business-to-Business
B2C	Business-to-Customer
BAS	Bharatiya Antariksh Station
BESS	Battery Energy Storage System
BFSI	Banking, Financial Services and Insurance
BKSY	Bangla Krishi Sech Yojana
BPM	Business Process Management
BPO	Business Process Outsourcing
BS VI	Bharat Stage VI
C4IR	Centre for Fourth Industrial Revolution
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CBG	Compressed Biogas
CCFI	Cabinet Committee on Foreign Investment
CFCs	Common Facility Centres
CHIPS	Creating Helpful Incentives to Produce Semiconductors
CKD	Completely Knocked Down
CMU	Cloud Monitoring Unit
CNG	Compressed Natural Gas
CO2	Carbon dioxide
CPCP	Comprehensive Port Connectivity Plan
CPG	Consumer Packaged Goods
CPOs	Charging Point Operators
CY	Current Year
DeepTech	Deep technology
DFC	Dedicated Freight Corridor
DISCOM	Distribution Companies
DLI	Design Linked Incentive
DPIIT	Department for Promotion of Industry and Internal Trade
DPT	Diphtheria Pertussis Tetanus
EC	Energy Conservation
E-commerce	Electronic Commerce
eFCI	Eligible Fixed Capital Investment
ELCOT	Electronics Corporation of Tamil Nadu Limited
EMC	Modified Electronics Manufacturing Clusters
EMEA	Europe, the Middle East and Africa
EMPS	The Electric Mobility Promotion scheme
EO	Earth Observation
EPC	Engineering Procurement and Construction

Abbreviation	Full form
EPF	Employee Provident Fund
ER&D	Engineering and Research and Development
ESDM	Electronic System Design and Manufacturing
ESG	Environmental, Social and Governance
ESI	Employee State Insurance
ESO	Energy Storage Obligations
ESS	Energy Storage Systems
EUR	Euro
EV	Electric Vehicle
FAME	Faster Adoption and Manufacturing of Hybrid and Electric Vehicles
FCI	Fixed Capital Investment
FDI	Foreign Direct Investment
FEMA	Foreign Exchange Management Act
FIF	Foreign Investment Facilitation Portal
FinTech	Financial Technology
FIPB	Foreign Investment Promotion Board
FPIs	Foreign Portfolio Investors
FTAs	Free Trade Agreements
FY	Financial Year
GCTs	Gati Shakti Multi Modal Cargo Terminals
GDP	Gross Domestic Product
GERC	Gujarat Electricity Regulatory Commission
GIDC	Gujarat Industrial Development Corporation
GIFT City	Gujarat International Finance Tec-City
GOBARdhan	Galvanising Organic Bio-Agro Resources Dhan
Gol	Government of India
GoK	Government of Karnataka
GST	Goods and Services Tax
GVA	Gross Value Added
GW	Gigawatt
GWh	Gigawatt Hour
HDB	Hubballi-Dharwad-Belagavi
HESS	Hybrid Energy Storage Systems
HSBC	Hongkong and Shanghai Banking Corporation
HY	Half Year
IC	Integrated Circuit
ICDs	Inland Container Depots
ICM	Indian Carbon Market
IDEMI	Institute for Design of Electrical Measuring Instruments
IDMs	Integrated Device Manufacturers
IFSC	International Financial Services Centre
INR	Indian Rupee
InSPACE	Indian National Space Promotion and Authorisation Centre
IoT	Internet of Things
IPO	Initial Public Offering
Ips	Intellectual Properties
IRA	Inflation Reduction Act
ISM	India Semiconductor Mission
ISpA	Indian Space Association
ISRO	Indian Space Research Organisation
ISTS	Inter-State Transmission System
IT	Information Technology

Abbreviation	Full form
ITES	Information Technology Enabled Services
IXPs	Interconnect Exchanges
JPP	Joint Parcel Product
JPY	Japanese Yen
JV	Joint Venture
KABIL	Khanij Bidesh India Ltd
KDEM	Karnataka Digital Economy Mission
kg	Kilogram
KV	Kilovolt
kWh	Kilowatt-hour
LCD	Liquid Crystal Display
LCoS	Levelised Cost of Storage
LHB	Linke Hofmann Busch
LNG	Liquefied Natural Gas
M&As	Mergers and Acquisitions
MeitY	Ministry of Electronics and Information Technology
MICE	Meetings, Incentives, Conferences and Exhibitions
MMF	Man-Made Fibre
MMLPs	Multi-Modal Logistics Parks
MMT	Million Metric Tons
MMTA	Million Metric Tonnes per Annum
MNRE	Ministry of New and Renewable Energy
MoU	Memorandum of Understanding
MPIDC	Madhya Pradesh Industrial Development Corporation
MSME	Ministry of Micro, Small and Medium Enterprises
MTPA	Million Tonnes Per Annum
MW	Megawatt
Nano DAP	Nano Diammonium phosphate
NavIC	Navigation with Indian Constellation
NBFCs	Non-Banking Financial Company
NCR	National Capital Region
NDCs	Nationally Determined Contributions
NDRC	National Development and Reform Commission
NEA	National Energy Administration
NEP	The National Electricity Plan
NGEs	Non-Government Entities
NHAI	National Highways Authority of India
NID	Mantra, National Institute of Design
NIFT	National Institute of Fashion Technology
NISAR	NASA ISRO Synthetic Aperture Radar
NLP	National Logistics Policy
NPE	National Policy on Electronics
NSIL	NewSpace India Limited
OEMs	Original Equipment Manufacturer
OPEX	Operating Expense
OSAT	Outsourced Semiconductor Assembly and Test
OTT	Over the Top
PDC	Project Development Cell
PE	Private Equity
PIPE	Private Investment in Public Equity
PLI	Production Linked Incentives
PM KUSUM	Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyaan
PMP	Phased Manufacturing Programme
PPPs	Public-Private Partnerships

Abbreviation	Full form
PSI	Package Scheme of Incentives
PSP	Pumped Storage Projects
PVs	Passenger Vehicles
PV	Photovoltaic
R&D	Research and Development
RDSO	Research Design and Standards Organisation
RE	Renewable Energy
RIPS	Rajasthan Investment Promotion Scheme
RPO	Renewable Purchase Obligations
RTC	Round the Clock
SATCOM	Satellite Communications
SC/ST	Scheduled Castes/Scheduled Tribes
SERCs	State Electricity Regulatory Commissions
SEZs	Special Economic Zones
SGST	State Goods and Service Tax
SIFC	State Investment Facilitation Centre
SIGHT programme	Strategic Interventions for Green Hydrogen Transition
SIPCOT	State Industries Promotion Corporation of Tamil Nadu
SoC	System-on-a-Chip
SPECS	Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors
SSBs	Solid-State Batteries
TANGEDCO	Tamil Nadu Generation and Distribution Corporation Limited
The UAE	The United Arab Emirates
The US	The United States
TIDCO	Tamil Nadu Industrial Development Corporation Limited
T-IDEA	Telangana State Industrial Development and Entrepreneur Advancement
T-PRIDE	Telangana State Programme for Rapid Incubation of Dalit Entrepreneurs
TRAI	Telecom Regulatory Authority of India
TRISHNA	Thermal Infra-Red Imaging Satellite for High-resolution Natural Resource Assessment
TSIIC	Telangana State Industrial Infrastructure Corporation
TS-iPASS	Telangana State Industrial Project Approval and Self-Certification System
UDAN	Ude Desh Ka Aam Naagrik
ULIP	Unified Logistics Interface Platform
UPDIC	UP Defence Industrial Corridor
UPI	Unified Payments Interface
UPNEDA	Uttar Pradesh New and Renewable Energy Development Agency
USD	United States Dollar
V2X	Vehicle to Everything
VC	Venture Capital
VGF	Viability Gap Funding
WBILAP	West Bengal Integrated Logistics Action Plan
WBLDC	West Bengal Logistics Development Council

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