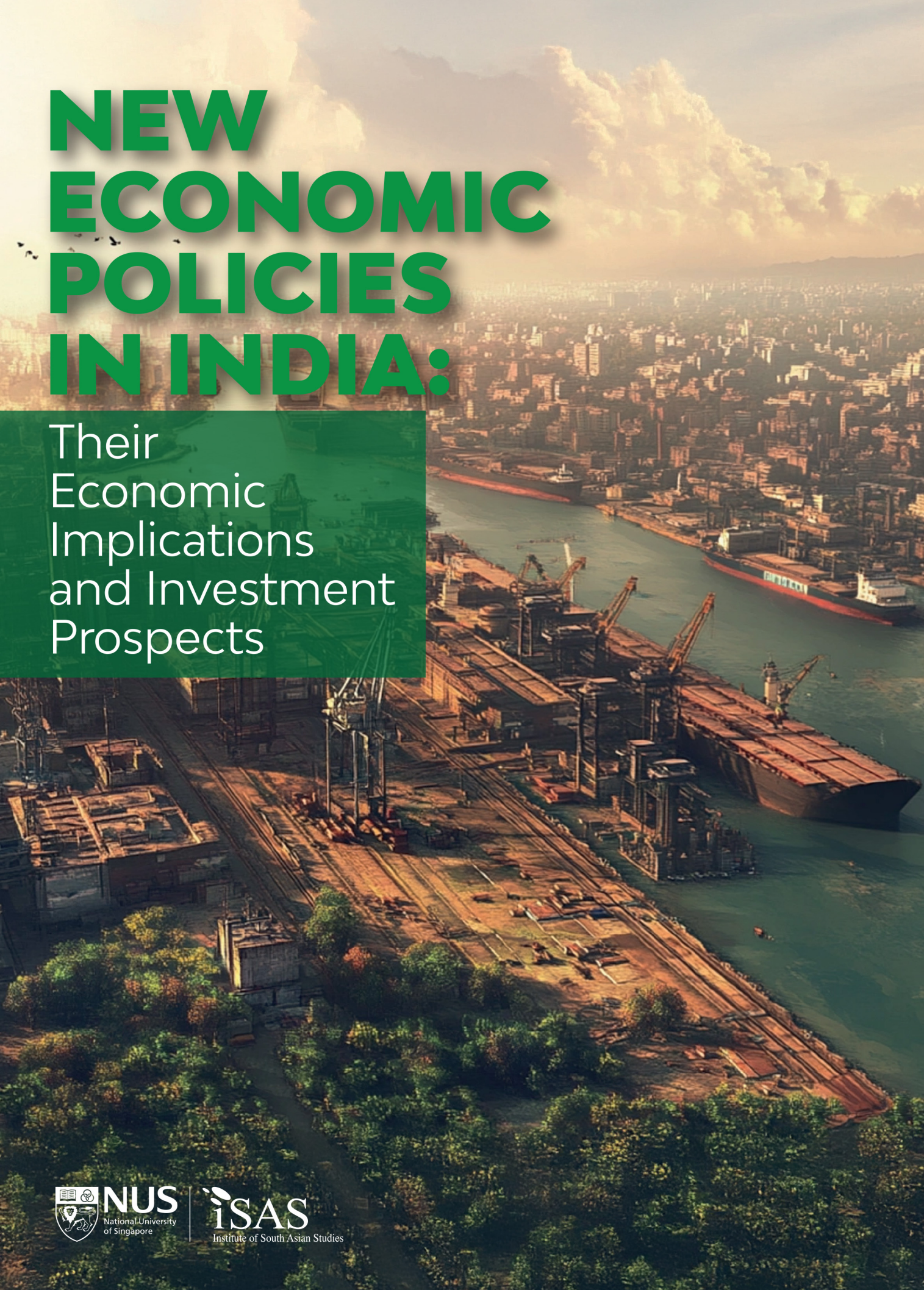

NEW ECONOMIC POLICIES IN INDIA:

Their Economic Implications and Investment Prospects

NUS National University of Singapore | ISAS Institute of South Asian Studies

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The Institute seeks to promote understanding of this vital region of the world and communicate knowledge and insights about it to policymakers, the business community, academia and civil society in Singapore and beyond.

ISAS Special Report
New Economic Policies in India: Their Economic Implications and Investment Prospects
October 2024

Authored by Amitendu Palit, Vinod Rai, Shavinyaa Vijaykumarr, Divya Murali and Mekhla Jha

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CONTENTS

List of Abbreviations

Abbreviations	Full Description
AAI	Airport Authority of India
AAP	Aam Aadmi Party
ACC	Advanced Chemistry Scale
ADB	Asian Development Bank
AGR	Adjusted Gross Revenue
AI	Artificial Intelligence
AICTE	All India Council for Technical Education
API	Active Pharmaceutical Ingredients
AVGC	Animation, Visual Effects, Gaming and Comics
BEPS	Base Erosion and Profit Sharing
BJP	Bharatiya Janata Party
BOO	Build, Own, Operate
CCEA	Cabinet Committee on Economic Affairs
CECA	Comprehensive Economic Cooperation Agreement
CETP	Common Effluent Treatment Plant
CES	Coastal Economic Zone
COP	United Nations Climate Change Conference
CPCL	Chennai Petroleum Corporation Limited
CPSE	Central Public Sector Enterprises
CRIF	Central Road and Infrastructure Fund
CWC	Central Warehousing Corporation
DBFOT	Design, Build, Finance, Operate and Transfer
DEA	Department of Economic Affairs
DFI	Development Financial Institution
DIPP	Department of Industrial Promotion and Policy
DISCOM	Distribution Companies
DMI	Dhaya Maju Infrastructure
DMIC	Delhi Mumbai Industrial Corridor
DPIA	Dighi Port Industrial Area
DPIIT	Department for Promotion of Industry and Internal Trade
DPM	Draft Placement Memorandum
DPR	Detailed Project Report

EB	E-Business
EI	Economic Importance
EM	Electric Mobility
EPF	Employers Provident Fund
ESCOM	Electricity Supply Company in the State
ESDM	Electronic Systems Design & Manufacturing
ESG	Environment, Social Governance
ESIC	Employees' State Insurance Corporation
ETP	Effluent Treatment Plant
EU	European Union
EV	Electric Vehicle
EXP	Expressway
FAB	Semiconductor Fabrication
FBG	Financial Bank Guarantee
FCI	Food Corporation of India
FDI	Foreign Direct Investment
FPO	Farmer Producer organisations
FTA	Free Trade Agreement
FY	Financial Year
GAIL	Gas Authority of India Limited
GARUD	Gandhinagar Railway & Urban Development Corporation Limited
GDP	Gross Domestic Product
GEDA	Gujarat Energy Development Agency
GIFT	Gujarat International Finance Tec-City
GIS	Geographic Information Systems
GMV	Gross Merchandise Value
GOI	Government of India
GPRA	General Pool Residential Accommodation
GST	Goods and Services Tax
GSY	Gati Shakti Yojana
GVFL	Gujarat Venture Finance Limited
GW	Gigawatt
HPCL	Hindustan Petroleum Corporation Limited
ICICI	Industrial Credit and Investment Corporation of India (Bank)
IDBI	Industrial Development Bank of India Limited (Bank)

IDCP	Integrated Data Centre Parks
IDPMS	Import Data Processing and Management System
IFA	Investor Facilitation Act
IFCI	Industrial Finance Corporation of India
IFSCA	International Financial Services Centre Authority
IMT	International Mobile Telecommunications
INFUSE	IN for incubators; FU for Fund of Funds; SE for Start-up Entrepreneurs
₹	Indian Rupee
IOC	Indian Oil Corporation
IPR	intellectual property rights
ISC	Interstate Connectivity
ISRO	Indian Space Research Organisation
ISTS	Inter State Transmission System
IT	Information Technology
ITDC	India Tourism Development Corporation
IVP	Innovation Voucher Programme
IWAI	Inland Waterways Authority of India
JNPT	Jawaharlal Nehru Port Trust
JV	Joint venture
KIADB	Karnataka Industrial Area Development Board
KLD	Kilo litres per day
KREDL	Karnataka Renewable Energy Development Limited
KSM	Key Starting Materials
KSSIDC	Karnataka State Small Industries Development Corporation
KV	Kilovolts
LARR	Land Acquisition, Resettlement and Rehabilitation
LC	Letter of Credit
LF	Licence Fee
LPG	Liquified Petroleum Gas
LVB	Lakshmi Vilas Bank
MCLR	Marginal Cost of Lending Rate
MDO	Mine Developer and Operator
MHs	Megahertz
MMLP	Multimodal Logistics Parks
MMTPA	Million metric tonnes per annum

MNRE	Ministry of New and Renewable Energy
MPCB	Maharashtra Pollution Control Board
MSME	Micro small and medium enterprises
MSRTC	Maharashtra State Road Transport Corporation
MTD	Model Tender Documents
MVA	Maha Vikas Aghadi
MW	Megawatt
NABARD	National Bank for Agriculture and Rural Development
NaBFID	National Bank for Financing Infrastructure and Development
NCP	National Congress Party
NDCP	National Digital Communications Policy
NHAI	National Highways Authority of India
NHPC	National Hydroelectric Power Corporation
NIP	National Infrastructure Pipeline
NLC	Neyveli Lignite Corporation Ltd
NMP	National Monetisation Pipeline
NPV	Net Present Value
NSDTS	National Security Directive on the Telecommunication Sector
NSWS	National Single Window System
NTPC	National Thermal Power Corporation Limited
NW	National Waterways
OECD	Organisation for Economic Co-operation and Development
OJSC	Open Joint-stock Company
OMT	Operate Maintain Transfer
OSH	Occupational and Safety Health Code
PBG	Performance Bank Guarantees
PGCIL	Power Grid Corporation of India Limited
PLI	Production-linked Incentives
POL	Port of Loading
PPP	Public-private Partnership
PXIL	Power Exchange India Limited
RBI	Reserve Bank of India
RE	Renewable Energy
RFP	Request for Proposal

RIL	Reliance Industries Limited
RPO	Renewable Purchase Obligations
RTM	Regulated Tariff Mechanism
SBI	State Bank of India
SBIA	Shendra Bidkin Industrial Area
SEBI	Securities and Exchange Board of India
SES	Special Economic Zones
S$	Singapore Dollar
SGST	State Goods and Services
SIDBI	Small Industries Development Bank of India
SIPB	State Investment Promotion Board
SIPCOT	State Industries Promotion Corporation of Tamilnadu Ltd
SJVNL	Satluj Jal Vidyut Nigam Limited
SPV	Special Purpose Vehicle
SC/ST	Scheduled Castes and Scheduled Tribes
STP	Secondary Treatment Plant
STU	State Transmission Utilities
SUC	Spectrum Usage Charge
SWIFT	Single Window Interface for Trade
SWS	Single Window Systems
TBCB	Tariff-Based Competitive Bidding
TDR	transferable development rights
TIIC	Tamilnadu Industrial Investment Corporation
TNEDA	Tamil Nadu Energy Development Agency
TNERC	Tamil Nadu Electricity Regulatory Commission
TNSDC	Tamil Nadu Skill Development Corporation
TOT	Toll Operate and Transfer
TSP	Telecommunication Service Providers
UAE	United Arab Emirates
UK	United Kingdom
UP	Uttar Pradesh
US$	United States Dollar
UT	Union Territories
VAT	Value-added Tax
WTO	World Trade Organization

Foreword

This Special Report has been prepared by the Institute of South Asian Studies (ISAS) at the National University of Singapore (NUS). The research team for the report includes Dr Amitendu Palit, Senior Research Fellow and Research Lead (Trade and Economics), ISAS; Mr Vinod Rai, Distinguished Visiting Research Fellow, ISAS, and former Comptroller and Auditor General of India; and Ms Shavinyaa Vijaykumarr, former Research Analyst, ISAS. The team was supported by Ms Divya Murali, Research Analyst, ISAS; and Ms Mekhla Jha, former Graduate Research Assistant at the Lee Kuan Yew School of Public Policy, NUS.

Several external experts contributed to the perceptions reflected in the report.

Several external experts contributed to the perceptions reflected in the report. The research team would like to gratefully acknowledge the immensely useful contribution of Mr Subhomoy Bhattacharjee, Consulting Editor, *Business Standard*, India, who was a consultant for the report. The team is grateful to the various officials from the Indian government – and the state governments of Gujarat, Maharashtra, Karnataka, Tamil Nadu and Uttar Pradesh – who engaged with the research team and offered valuable insights. The team acknowledges similar insights obtained from the Confederation of Indian Industry and the Federation of Small and Medium Enterprises, India.

The report was prepared during the period 1 September 2021 to 31 March 2022. This was a period during which distressing COVID-19 conditions prevailed in both India and Singapore. The fieldwork and research could not have proceeded without the support of the ISAS management – Associate Professor Iqbal Singh Sevea, Director; Mr Hernaikh Singh, Deputy Director; Ms Sithara Doriasamy, Associate Director; and Professor C Raja Mohan, former Director and Visiting Research Professor. The team is grateful for their generous support.

Finally, the report team would like to thank the Ministry of Trade and Industry, Singapore, for commissioning the project and enabling the growth and pursuit of this valuable research.

Introduction

The early years of the current decade have been exceptional for the Indian economy. The outbreak of the COVID-19 pandemic in early 2020 led to extensive human, social and economic distress. However, it also made India realise the importance of addressing some critical deficiencies and structural imperfections in the economy. In this respect, the outbreak of the pandemic and the policies that have been announced thereafter mark a turning point in India's efforts to achieve domestic economic self-reliance, sustainable development and deeper integration with global production networks and supply chains.

Over the last couple of years, the central and several state governments in India have introduced policies that would have far-reaching impacts on economic modernisation, growth of scale, employment and investment prospects in agriculture, manufacturing and infrastructure industries. At the same time, these would also affect India's efforts to transition to a net-zero economy by 2070, including the ambitious commitments to obtain large chunks of electricity from non-fossil fuel sources and cut down on carbon emissions.

While the target is highly ambitious and challenging, it indicates the stakes involved in drafting policies to achieve the targets.

India has begun a relatively new industrial plan of building self-reliance in manufacturing. The share of manufacturing in overall gross domestic product (GDP) is around 17 per cent at present. The government aims to raise the share to 25 per cent in the foreseeable future. While the target is highly ambitious and challenging, it indicates the stakes involved in drafting policies to achieve the targets. The policies from both the central and state governments are focused on enhancing domestic capacities in various manufacturing industries to contribute to India's greater objective of becoming a global production hub.

A set of significant policies aiming to incentivise investments in expanding local capacities are production-linked incentive (PLI) schemes, launched for several sectors. The schemes include semiconductors, electronics, electric vehicles, pharmaceuticals,

steel, textiles, logistics, food products and renewable energy. India is engaging proactively with investors to attract long-term foreign direct investment (FDI) to become a global producer of key goods and services.

The National Infrastructure Pipeline Project, announced by Prime Minister Narendra Modi in his Independence Day Speech on 15 August 2020, is a major initiative in expanding domestic multi-modal connectivity. The efforts have been complemented by the announcements on *Gati Shakti Yojana* (GSY) – the overarching vision plan for augmenting progress on multi-modal connectivity. Expansion in multi-modal connectivity is expected to significantly reduce logistics costs in India with a positive impact on the overall cost of doing business. Investments for infrastructure have also been proposed to be mobilised through the National Monetisation Pipeline (NMP) which is leasing out state-owned operational infrastructure assets to private investors for operation and maintenance.

The efforts have been complemented by the announcements on Gati Shakti Yojana (GSY) – the overarching vision plan for augmenting progress on multi-modal connectivity.

New economic policies aiming to enhance efficiencies in factor markets (for example, land and labour laws) and the ambitious infrastructure development plans should contribute to India emerging as a major regional location for upstream production, downstream assembling and distribution, final demand markets and third country exports. This presents interesting opportunities for long-term investments in India. The new policies can complement India's traditional advantages of a large domestic market, innovative start-ups, rapid growth of the digital economy, robust consumption and stable returns on long-term investments.

The challenge for achieving the full potential of the new policies is in overcoming India's unsatisfactory record of policy implementation, particularly by many state and local governments. These poor records continue to pose doubts about the long-term effectiveness of the new policies. An objective assessment of the probable outcomes of the policies needs their critical examination in light of implementation hurdles. Such assessment is crucial for firming up long-term investor plans about investing in India.

The new policies are expected to enhance more investor opportunities across various segments of manufacturing and services supply chains, as Indian states position themselves to welcome new capacities.

Singapore's current investments in India are spread across a wide variety of critical sectors, including logistics, ports, civil aviation, energy, telecommunication, real estate and skill development. The new policies are expected to enhance more investor opportunities across various segments of manufacturing and services supply chains, as Indian states position themselves to welcome new capacities. The situation is conducive for Singapore businesses to look afresh at India as a major regional production centre, both for domestic final demand as well as third-country export opportunities.

This report is an effort to study the large number of manufacturing and logistics policies that have been taken by India over the last couple of years. An understanding of these policies is essential for assessing their impact on medium and long-term economic prospects. The policies that have been covered in this report include those that have been announced by the central government in India in manufacturing, foreign investment and infrastructure. They also include policies that have been announced by the states of Gujarat, Maharashtra, Tamil Nadu, Karnataka and Uttar Pradesh.

The research project has the following objectives:

1. Analyse the key policy recommendations by India's central government post-COVID-19 for their impact on manufacturing and logistics, considering the inefficiencies in policy implementation. The analysis includes efforts to identify the way various policies are implemented on the ground.

2. Analyse the impact (including political effect) of policies announced by major state governments (Karnataka, Maharashtra, Tamil Nadu, Uttar Pradesh and Gujarat, such as in land and labour laws, also considering the inefficiencies in policy implementation. While noting the way policy implementation would progress, the research would reflect on the economic, regulatory and political issues that surface in the process.

3. Study the outlook for specific sectors (as mentioned in 1) and states (as mentioned in 2) from the current and prospective perspectives of Singapore's policymakers and businesses.

4. Identify potential areas of trade and investment interest to Singapore businesses and policymakers as well as potential risks and challenges.

5. Provide recommendations to Singapore policymakers and businesses to respond to the opportunities identified.

The research report is divided into two parts.

Part A describes documents and analyses the policies mentioned above. There are six chapters in Part A. Chapter 1 is the introductory chapter and describes the context and objectives of the report. Chapter 2 discusses the various policies undertaken by the central government in India over the last couple of years with significant impact on industry and manufacturing. The chapter discusses the PLI systems, foreign investment policies, new labour laws, the national single window system and reforms in central government procurement policies. Chapter 3 focuses on Infrastructure and Logistics. The main policies discussed in this chapter include the National Infrastructure Pipeline (NIP); sectoral policy developments for roads, ports, shipping, telecommunication and logistics; GSY; NMP; the National Bank for Financing Infrastructure and Development (NaBFID); and the GIFT city. Chapter 4 covers the policies announced by the five states – Gujarat, Maharashtra, Karnataka, Tamil Nadu and Uttar Pradesh – with particular focus on policies for innovation, renewable energy and electric vehicles. Chapter 5 attempts a critical evaluation of the policies described in Chapters 2 to 4 and tries to identify the challenges that might come in the way of their implementation. Chapter 6 provides an overall assessment of the Indian economy at this current juncture and its prospects from a long-term investor's perspective.

The main policies discussed in this chapter include the National Infrastructure Pipeline (NIP); sectoral policy developments for roads, ports, shipping, telecommunication and logistics; GSY; NMP; the National Bank for Financing Infrastructure and Development (NaBFID); and the GIFT city.

Part B of the report is the statistical annexures.

The methodology behind the report has focused on gathering extensive data and information on the policies announced by the central and the five state governments in India. They have also focused on very significant engagement with many stakeholders. These include senior officials from the central and state governments, industry and business leaders and several technical experts.

Industry and Manufacturing

This chapter focuses on major policies announced by the central government with a significant impact on Indian manufacturing. The specific policies in this respect that are being studied are:

a) Production-linked incentives
b) New foreign investment rules
c) Labour laws
d) National single window system.
e) Central procurement policy reforms

Production-linked Incentives

The PLI schemes were introduced by the Indian government in 2020 to boost domestic manufacturing capacities and increase the competitiveness of domestic industries. These schemes – representative of India's efforts to increase self-reliance through the economic principle of *Atma Nirbhar Bharat* (Self-reliant India) – offer financial incentives to investors for investing in several specified industries. The financial incentives are linked to the values of incremental sales generated by the new investments and are offered on an incremental basis. Across industries, the incentives range from four to six per cent of incremental sales over four to six years.

The financial incentives are linked to the values of incremental sales generated by the new investments and are offered on an incremental basis.

The PLI schemes have been announced for 14 key manufacturing sectors. These are:

1. Pharmaceuticals
2. Critical Key Starting Materials/Drug Intermediates and Active Pharmaceutical Ingredients (APIs)
3. Medical devices
4. Speciality steel
5. Auto components
6. Textile products

7. Telecommunication and networking products
8. Large scale electronics
9. Food processing
10. White goods (air conditioners and LED lights)
11. High-efficiency solar photovoltaic (PV) modules
12. Giga-scale advanced chemistry scale battery storage
13. Drones and drone components.
14. Semiconductor production

The details of the schemes are in Annexure 2.1.

With a total outlay of ₹1,970 billion (S$35 billion), these schemes aim to significantly increase India's total industrial production, roughly by around ₹3 trillion (S$53 billion) during the period over which the incentives would apply. The PLI schemes do not link up the eligibility or quantum of their financial support to new exports and local value addition, thus making them WTO-compliant.

These are industries that are critical for India's long-term industrial growth and its emergence as a global manufacturing hub.

It is noticeable that the PLI schemes are being offered to increase local capacities in industries that have traditionally been India's prominent employment generators and export-oriented sectors, such as pharmaceuticals, medical devices, steel, auto components, textiles, telecommunication, food processing and electronics. These are industries that are critical for India's long-term industrial growth and its emergence as a global manufacturing hub. At the same time, the schemes also aim to incentivise cutting-edge technology-intensive new-generation industries like solar PV modules, semiconductors, ACC and drones. The overall objective is to ensure that private investors are encouraged and incentivised to invest in these sectors with a long-term perspective.

Box 2.1: Production Linked Incentive Scheme For Semiconductors

With the advent of IoT (Internet of things) and 5G technology in India, the demand for semiconductor chips is on the rise and is expected to reach about US$100 billion (S$130.39 billion) by 2025 from US$24 billion (S$31.29 billion) at present. Under the scheme, the central government will offer financial support to companies that want to manufacture a range of semiconductor goods in India. The objective is to build a strong domestic semiconductor industry for reducing the country's reliance on semiconductor imports, enhance exports and create new jobs.

Under the scheme, the central government will offer financial support to companies that want to manufacture a range of semiconductor goods in India.

Among all PLI schemes, the semiconductor scheme has the largest volume of subsidies with a total budget of ₹760 billion (S$14 billion). The scheme will offer financial support of up to 50 per cent of the cost of setting up semiconductor fabs (fabrication or manufacturing plants) and display fabs in India for eligible businesses. Around 100 domestic semiconductor design companies will be supported with the aim of enabling at least 20 such companies to achieve turnover of ₹15 billion (S$266 million) in the next five years. In addition, as a non-financial incentive, the government intends to support the business receiving subsidies through purchase preference in procurement of electronic products under the Public Procurement (Preference to 'Make in India') Order 2017.

The current geopolitical scenario prioritises the security of critical information infrastructure underpinning the importance of countries having access to trusted sources of semiconductors. Major global semiconductor producers from Taiwan, the US and South Korea have expressed keen interest to invest in India, with a special focus on domestic companies and startups. The scheme is envisaged to bring an investment of around US$22 billion (S$29.8 million) and generate over 135,000 jobs in the next four years.

The PLI scheme for semiconductors is an example of the approach employed for incentivising domestic industrial capacities in India for greater positioning in global supply chains. (Box 2.1)

New Foreign Investment Rules

India currently has one of the most liberal and open inward FDI regimes in the world. Currently, FDI up to 100 per cent is permitted under the automatic route (sans government approvals) in almost all sectors/ activities. Annexure 2.2 provides details of the current FDI policies across all major sectors of the economy. In the Union Budget 2022-23, the Finance Minister has outlined the virtuous cycle starting from private investment with public capital investment helping to crowd in private investment as one of the main pillars of the India@100 vision announced by the Prime Minister. Foreign investment is a significant component of this investment cycle.

The Consolidated FDI Policy Circular of 2020, announced by the Department for Promotion of Industry and Internal Trade (DPIIT), reflects the current FDI rules for various sectors and became operational from 15 October 2020. The previous consolidated FDI policy was issued in August 2017, and the DPIIT subsequently published various press notes and clarifications periodically, to liberalise and clarify norms for foreign investment in India. The FDI policy of 2020 consolidates these updates and is intended to provide a transparent and investor-friendly environment for foreign investors.

Several far-reaching FDI changes have been implemented in 2020.

Several far-reaching FDI changes have been implemented in 2020. These include the liberalisation of FDI rules in sensitive and economically significant sectors like defence production, airports, e-commerce, railways, construction and pharmaceuticals (Annexure 2.2 and Tables 2.2.1-2.2.5). In defence production, for example, FDI up to 74 per cent under the automatic route has been permitted for companies seeking new industrial licences from the earlier threshold of 49 per cent. Real estate broking service has been separated from real estate business and 100 per cent foreign investment is allowed in

the activity under the automatic route. Airports, railway infrastructure, e-commerce and pharmaceuticals can now obtain 100 per cent FDI.[1]

A limited number of industries continue to be prohibited for foreign investors. These are:

1. Real estate business,[2] construction of farmhouses and trading in transferable development rights.

2. Manufacturing of cigars, cheroots, cigarillos and cigarettes, of tobacco or tobacco substitutes.

3. Activities/sectors that are otherwise prohibited for private investment, such as atomic energy and railway operations (other than permitted activities).

Some sector-specific guidelines are applicable for FDI in civil aviation, construction, e-commerce, infrastructure companies in the securities market and the pharmaceuticals sectors. These are indicated in Annexure 2.3.

Measures taken by the government to put in place an enabling investor-friendly FDI Policy have resulted in increased FDI inflows, notwithstanding the difficult conditions created by the COVID-19 pandemic. In 2021-22, FDI inflows grew by four per cent in the first six months (April-September 2021) to reach US$43 billion (S$59 billion) as compared to US$41 billion (S$57 billion) for the same period of last year (April-September 2020).

Measures taken by the government to put in place an enabling investor-friendly FDI Policy have resulted in increased FDI inflows, notwithstanding the difficult conditions created by the COVID-19 pandemic.

Several initiatives (Box 2.2) have been taken by the government since April 2020 to further reform the FDI policy framework for facilitating an increased flow of long-term capital, global technology, processes and international best practices to support the growth of these sectors.

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1 The latest FDI Policy circular and Press Notes are at https://bit.ly/3GWLrHo.

2 'Real estate business' excludes the development of townships, construction of residential/commercial premises, roads or bridges and Real Estate Investment Trusts (REITs) registered and regulated under the SEBI (REITs) Regulations 2014.

Box 2.2: FDI Policy Reforms And Other Measures during the COVID-19 Pandemic Period

FDI beyond 74 per cent and up to 100 per cent will be permitted under the government route.

Measures taken to allow greater foreign participation:

I. Defence Sector: FDI in the defence sector is allowed up to 74 per cent through automatic route (from earlier 49 per cent) for companies seeking new industrial licences. FDI beyond 74 per cent and up to 100 per cent will be permitted under the government route. For existing FDI-approved holders/defence licensees, infusion of fresh foreign investment up to 49 per cent resulting in a change in equity/shareholding pattern can be done by making a declaration within 30 days.

II. Insurance Sector: Permissible FDI limit raised from 49 per cent to 74 per cent in insurance companies under the automatic route and allow foreign ownership and control with safeguards.

III. Petroleum and Natural Gas sector: Foreign investment up to 100 per cent under the automatic route in cases where the government has accorded 'in-principle' approval for strategic disinvestment of a public sector undertaking (PSU) engaged in the petroleum and natural gas sector.

IV. Telecommunication sector: Foreign investment up to 100 per cent under automatic route in the telecommunication services sector.

Curbing opportunistic acquisitions/takeovers:

The government amended the FDI policy according to which an entity of a country, which shares a land border with India or where the beneficial owner of investment into India is situated in or is a citizen of any such country, can invest only under the government route. Further, in the event of the transfer of ownership of any existing or future FDI in an entity in India, directly or indirectly, resulting in the beneficial ownership falling within the restriction/purview of the said policy amendment, such subsequent change in beneficial ownership will also require the government's approval.

Measures to **improve transparency and to rationalise processes** include amendment of the standard operating procedure (SOP) to improve ease of processing FDI proposals.

The **'FDI Monitoring Cell'** has been formed which follows up with applicant/ investor, to expedite FDI proposals with a view identify and hurdles if any. An Inter-Ministerial Committee (IMC) has been constituted under the Chairpersonship of Secretary, Department for Promotion of Industries and Internal Trade to take appropriate decisions on delayed proposals and those escalated by Administrative Ministries/ Departments.

Labour Laws

The central government's efforts to simplify labour laws have led to the coalescing of 29 erstwhile labour laws into four codes. Among these, the Code on Wages was enacted on 8 August 2019. The Codes on Industrial Relations; Occupational, Safety, Health and Working Conditions; and Social Security were legislated by the Indian parliament on 23 September 2020.

The rationale behind labour reform is to enable companies to adjust their labour requirements, along with changes in market demand, ensure better compliance with labour laws through online modes and shift the labour inspection regime from a negative emphasis on 'dos' and 'don'ts' to a positive 'inspector and facilitator' approach. These are key measures for easing compliance in the plan for single registration, single licence and single return for establishments hiring at least ten workers anywhere in the country. This will improve India's ranking in the Ease of Doing Business index, as earlier, this process involved obtaining licences under eight labour laws.

These are key measures for easing compliance in the plan for single registration, single licence and single return for establishments hiring at least ten workers anywhere in the country.

The Code on Wages and Industrial Relations will apply to all establishments, with limited exceptions. The Code permits state governments to fix their minimum wages, which had been a major concern with the states, as wages must be free to adjust according to industrial and market forces. The Code on Occupational Safety and

Health will apply to establishments with certain thresholds.[3] There are application thresholds for the Code on social security as well.[4] The Code provides for a separate social security fund for unorganised gig and platform workers.

Industrial Relations Code, 2020

The flexibility will enable employers to engage workers for fixed periods through written contracts on wages and social security benefits, as provided to permanent workers.

The Code provides employers with the flexibility to employ workers on a fixed-term basis, based on requirements and without restriction on any sector. The flexibility will enable employers to engage workers for fixed periods through written contracts on wages and social security benefits, as provided to permanent workers.

The Code raises the employment limits of industrial establishments in mines, factories and plantations, from 100 to 300 workers, to seek the permission of the government before lay-off, retrenchment and closure, with the flexibility to the government to increase the threshold to higher numbers through a notification. To prohibit strikes and lockouts in all industrial establishments, the Code provides for a minimum notice of 14 days.

The Code provides for the establishment of a Grievance Redressal Committee of up to 10 members in an industrial establishment employing 20 or more workers, with adequate representation of women workers, in the proportion of the female workers employed in the industrial establishment. This is expected to contribute significantly to the growth of trust among all stakeholders.

Occupational Safety, Health and Working Conditions Code, 2020

The Code introduces the concept of "one registration" for all establishments having 10 or more employees. It also provides

[3] It will apply to establishments with more than 10 employees with power, or 20 employees without power, or where hazardous activities are being carried out and in mines and plantations. The threshold for factories will be 20 employees (with power) and 40 employees (without power). The conditions do not apply to establishments in mines and docks.

[4] These will apply to establishments with 10 or more employees that draw state insurance and 20 or more employees for those providing provident fund in the organised sector.

for issuing a mandatory appointment letter by the employer of an establishment to promote formalisation in employment and provide free annual health check-ups for employees above the specified age in all or certain classes of establishments.

Social Security Code, 2020

The Code provides for the constitution of various bodies for social security organisations, namely,

a. Central Board of Trustees of the Employees' Provident Fund.
b. Employees' State Insurance Corporation (ESIC).
c. National Social Security Board for Unorganised Workers.
d. State Unorganised Workers' Social Security Board
e. State Building Worker Welfare Board.

The Code empowers the central government to frame schemes for unorganised,[5] gig[6] and platform workers[7] – as defined and explained by the legislation – and their families for benefits relating to the ESIC. It also empowers the central government to formulate schemes to provide social security benefits to self-employed workers and register every unorganised gig worker or platform worker on self-declaration. These provisions underline efforts of the labour codes to recognise the new categories among the workforce and new work organisations emerging in the Indian labour market.

These provisions underline efforts of the labour codes to recognise the new categories among the workforce and new work organisations emerging in the Indian labour market.

The Code provides for different schemes for unorganised, gig and platform workers and defines the role that aggregators[8] may be expected to play in some of these schemes. The schemes for gig and platform workers might be funded through a combination of contributions from the central government, state governments and aggregators.

5 Unorganised workers include self-employed persons.
6 Gig workers are workers outside the "traditional employer-employee relationship".
7 Platform workers, while being outside the "traditional employer-employee relationship", access organisations or individuals through online platforms and provide services.
8 Aggregators include ride sharing services, food and grocery delivery services, content and media services and e-marketplaces.

Labour Laws and State Governments

Most central labour laws are implemented by the central and state governments in establishments where they have the 'appropriate' government, as specified in the laws.

The central and state governments have concurrent responsibility in legislating and implementing labour laws. Consequently, labour and labour welfare issues, figure in the Concurrent List of the Indian Constitution (List III). Most central labour laws are implemented by the central and state governments in establishments where they have the 'appropriate' government, as specified in the laws. An important implication of this is that even if the Codes have been enacted by the central government, provisions have been made for appropriate governments (meaning the states) to take requisite steps to implement them,[9] either by framing their own rules, or adopting the central laws and applying them to states.

Notwithstanding the concurrent jurisdiction over the laws, the new Codes are expected to attract new industrial investments and create jobs. They should also result in simpler compliance for the industry and reduce costs in running businesses.[10]

Institutional Changes

The new labour Codes have ushered in significant institutional changes.

The Occupational and Safety Health (OSH) Code 2020 proposes constituting the National Occupational Safety and Health Advisory Board to make policy recommendations to the central government on matters relating to occupational safety, health and working conditions of workers both at the central and state levels. The Board will advise on health and safety standards, and rules and regulations to be framed under the OSH Code, 2020, implementation of the provisions of the code, and the issues relating to occupational safety and health referred to it. The Board brings in a wider statutory consultative process within policy formulation enabling matters related to the

9 States like Rajasthan and Madhya Pradesh had taken the initiative to enact progressive labour laws to enhance ease of doing business and attracting investments.

10 Codes introducing 'one registration – 'one licence' and 'one return' systems reduce the number of returns to be submitted by industry to government as well as registered be maintained for inspection.

health and safety of workers to be contemporary and aligned to larger technological changes.

A new concept of an inspector and facilitator has been created to advise employers and workers on issues concerning wages and on the implementation of the codes. It will also inspect establishments assigned to it by the government based on an inspection scheme. The mechanism includes generating web-based maintenance of registers and records, filing of returns, assignment of unique numbers to each establishment and timely uploading of inspection reports.

National Single Window System

The central government has launched a National Single Window System (NSWS) that will enable investors to upload their investment proposals on the site and check the progress of various clearances by central and state government departments. A common registration form will be offered to investors, which shall auto-populate the information, eliminating the need to fill in the same information repeatedly and will include detailed information on land banks. The initiative should significantly cut down the time taken to clear investment proposals at the central, state and municipal levels.

The initiative should significantly cut down the time taken to clear investment proposals at the central, state and municipal levels.

With the harmonisation of rules across ministries of the central government for the treatment of investment proposals, the emphasis is to expedite faster – an objective that should be facilitated by the NSWS. As a tracking mechanism, it will address information asymmetry, cut duplication of information submitted across platforms and authorities, and remove hurdles in the tracking of approvals and registrations faced by investors.[11]

Extensive consultations have taken place among central government departments and state governments to make the NSWS effective. Those states, which have pioneered Single Window Systems (SWS),

[11] The NSWS embodies the Investment Clearance Cell proposed by Finance Minister Nirmala Sitharaman in her Union Budget speech for FY2020. She had said the cell will provide "end to end" facilitation and support to investors, including pre-investment advisory, provide information related to land banks and facilitate clearances at Centre and State level. The cell was proposed to operate through an online digital portal. However, this service is only for guidance purposes and does not constitute any legal advice.

have given their perspectives. Furthermore, discussions were undertaken with industry associations, professional bodies and legal firms to understand the expectations from the envisioned single window system.

Another 14 central government departments and five states will be onboarded by December 2021.

The Beta version of the NSWS is being tested for the promotion of industrial policy and internal trade. As of now NSWS hosts approvals from 18 central government departments and nine states and is aimed at guiding investors to the list of business approvals they may need, based on information provided by them. Another 14 central government departments and five states will be onboarded by December 2021. It will not scrap the existing information technology (IT) platforms of departments and states but integrate those.[12]

Central Procurement Policy Reforms

The central government has been changing its procurement process to make it simple, uniform and transparent. The major changes proposed in this regard are:

a. Issue of Model Tender Documents (MTD) by the Ministry of Finance in November 2021.[13]

b. Setting up a government e-marketplace (GeM) platform in 2016 to serve as a national public procurement portal for departments and state-owned companies for their requirements.

c. Public Procurement (Preference to 'Make in India') Order of 16 September 2020 to enable nodal ministries and departments to mandate higher minimum local content requirements for suppliers.

In India, government procurement constitutes about 30 per cent of the GDP according to an estimate by the Competition Commission of India.[14] Yet, till recently, there was no uniform procedure for procurement. The various independent agency procurement

12 More details are at https://pib.gov.in/PressReleasePage.aspx?PRID=1756966.
13 MTDs specifically cater to needs of e-procurement, easing digitisation process of Public Procurement & help in achieving goal of Digital India, 29 October 2021, https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1767517.
14 https://bit.ly/3o4aJui.

processes did not serve the purpose of the importance of competition to ensure efficient outcomes.[15]

Model Tender Documents

The rationale for the MTD is to ensure efficient outcomes by taking advantage of the ease created by the wholesale adoption of e-procurement as part of the central government's Digital India initiative. Tender documents are the critical touchpoint between government and industry and are crucial for implementing policy initiatives on the ground. Uniform tender documents enable the government to express policies effectively. They also ensure clarity of tender applications increasing compliance and enhancing confidence in the public procurement process.

Uniform tender documents enable the government to express policies effectively.

To ensure that government departments do not contradict each other in issuing the MTDs, it has been clarified that the templates shall be issued by the Department of Expenditure in the Ministry of Finance. Other Ministries and departments shall customise the templates for their specialised needs.

Detailed guidance notes have been prepared for using the MTDs. These are to be read with General Financial Rules issued in March 2017. Additionally, three procurement Manuals, the Manual for Procurement of Goods, 2017, Manual for Procurement of Consultancy and Other Services, 2017 and Manual for Procurement of Works, 2019, have also been developed.

Government e-Marketplace

The GeM has an exclusive mandate from the government departments to procure supplies for them and would account for 40 per cent of the gross merchandise value (GMV) of all e-commerce companies in India. It will be a platform for buyers and sellers like any other

[15] There were state procurement rules like the Tamil Nadu Public Procurement Act, The Karnataka Public Procurement Act, The Rajasthan Transparency in Public procurement Act, 2012. These were added to by a set of Government Financial Rules, Manuals, Guidelines and Instructions, often contradictory.

The GeM will provide for e-bidding, reverse e-auction and demand aggregation.

e-commerce platform, with buyers being government departments and public sector units and sellers being enterprises and individuals keen on selling their goods and services to the departments. The GeM will provide for e-bidding, reverse e-auction and demand aggregation.[16] Most sellers on the GeM platform are not required to pay commissions.

Local Content

In September 2020, the central government revised its Public Procurement Order, 2017, to enable nodal ministries and departments to notify higher minimum local content requirements for Class-I and Class-II local suppliers. Tenders of up to ₹2000 million (S$35.42 million) can be bid only on domestic companies with exemptions decided on a case-by-case basis by the Department of Expenditure, Finance Ministry.[17] The larger order noted that entities of countries that do not allow Indian companies to participate in their government procurement for any item, shall not be allowed to participate in government procurement in India for all items except for a small escape clause.

The central government has subsequently clarified that public procurement norms shall give preference to local suppliers in public-private partnership (PPP) projects too. Thus, while the market for government procurement has expanded, companies need to set up local manufacturing bases to take advantage.

16 More details about the GeM are available here https://gem.gov.in/aboutus.
17 More details at https://bit.ly/3EO1SUf and https://bit.ly/3ESyGM7.

Infrastructure and Logistics

The chapter examines various initiatives announced for the development of infrastructure and logistics capacities in India, including initiatives for mobilising infrastructure finance. The initiatives examined in this regard are:

a) National Infrastructure Pipeline
b) Sectoral Policies – Roads; Telecommunication & Digital Sector; Logistics, Ports & Shipping
c) Gati Shakti Yojana (Multimodal connectivity policy)
d) National Monetisation Pipeline
e) National Bank for Financing and Infrastructure Development
f) International Financial Services Centre Authority (IFSCA) and GIFT City

The National Infrastructure Pipeline

The NIP report was released in December 2019 by the Ministry of Finance. This was following the idea mooted by Finance Minister Nirmala Sitharaman in her budget speech for FY2020. Subsequently, a Task Force, headed by the Secretary, Department of Economic Affairs (DEA) in the Ministry of Finance, was appointed to flesh out how the NIP should operate. The Committee submitted its report in April 2020.[18] It recommended setting up a committee to monitor NIP progress and eliminate delays; Steering Committees in each Infrastructure Ministry for following up implementation; and a Steering Committee in the DEA for raising financial resources for the NIP. All the recommendations have been accepted.

Subsequently, a Task Force, headed by the Secretary, Department of Economic Affairs (DEA) in the Ministry of Finance, was appointed to flesh out how the NIP should operate.

[18] The Final Report of NIP task force is available at https://indiainvestmentgrid.gov.in/.

At current projections, there are more than 9,000 projects with a total capital outlay of US$1.5 trillion (S$2 trillion) in the NIP. Of these, 2,482 projects are under development across 34 sub-sectors.

The NIP's articulation follows the realisation that poor infrastructure was among the biggest hurdles facing the Indian government's strategy of 'Make in India'. Correcting the infrastructure deficit will raise manufacturing capabilities and support higher GDP growth for generating employment.[19] Indeed, the emphases are like those of the UK and the US.[20]

The NIP is a first-of-its-kind, whole-of-government exercise.

The NIP is a first-of-its-kind, whole-of-government exercise. Its operating principle is based on the logic that a simultaneous development of NIP-listed projects shall improve the quality of life for all citizens across the economy simultaneously. It aims to improve project preparation, attract investments (both domestic and foreign) into infrastructure, and is a crucial component for India's plans to become a US$5 trillion (S$7 trillion) economy by FY2025.

The NIP is a register of projects made on a best-effort basis by aggregating the information provided by various stakeholders, including line ministries, departments, state governments and private sector across infrastructure sub-sectors identified in the Harmonised Master List of Infrastructure. To draw up the NIP, a bottom-up approach was adopted wherein all projects (greenfield or brownfield, under implementation or conceptualisation) costing greater than ₹1 billion (S$18 million) per project were sought to be captured. The register is live in the sense that projects get added and those that are completed drop out of the list. Around 40 per cent of projects are under implementation, 30 per cent are at the conceptual stage and the remaining are yet to be crystallised.

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19 Important pointers in this regard are available in a study conducted by the S&P Global Ratings https://www.spglobal.com/en/research-insights/articles/the-missing-piece-in-indias-economic-growth-story-robust-infrastructure.

20 The UK has released a National Infrastructure and Construction Pipeline in 2021 while the US has adopted an Infrastructure Deal (Infrastructure Investment and Jobs Act) 2021.

Energy (24 per cent), roads (18 per cent), urban infrastructure (17 per cent) and railways (12 per cent) account for more than 70 per cent of the projected infrastructure investments. The central government (39 per cent) and the states (40 per cent) are expected to have an almost equal share in implementing the NIP in India, followed by the private sector (21 per cent).[21]

From a foreign investor's perspective, the NIP register provides visibility to prospective investors, who can access updated project-level information. At predefined intervals, each line ministry or the concerned state governments would further add new projects and update their respective project details at pre-defined time intervals so that updated data is available to prospective investors.

The basic monitoring of the NIP will vest with the Ministries and project agencies. The Ministry of Finance has been holding review meetings on the progress of infrastructure projects since October 2021 with key ministries.[22]

Sectoral Policies

Roads

India has the second-largest road network in the world. The network transports 64.5 per cent of all goods in the country and 90 per cent of India's total passenger traffic. The quality of roads, though, varies widely across the country.

India has the second-largest road network in the world.

India's major road infrastructure projects in the past have been the Golden Quadrilateral and the National Highway Road Development

21 Task Force on National Infrastructure Pipeline presents its Final Report to Finance Minister Smt. Nirmala Sitharaman, 29 April 2020, https://pib.gov.in/PressReleasePage.aspx?PRID=1619236.

22 In the latest review meeting in November 2021 (https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1769043), the Finance Minister reiterated priority of infrastructure projects for the government. Indicating the flexibilities required for implementation of ongoing projects, the Ministry of Road Transport and Highways was advised to shift from quarterly to monthly review of specific projects to ensure their timely completion of projects. The Ministry of Petroleum and Natural Gas was asked to include progress report on completion of refineries.

projects. The two most significant initiatives at present include the Bharatmala Pariyojana Phase-I, which began in October 2017 with an aggregate length of about 34,800 kilometres (km) [including 10,000 km residual National Highways Development Programme stretches[at an estimated outlay of ₹5.35 trillion (S$95 billion). The other includes projects identified under the NIP to be implemented in the next two to three years at a cost of ₹1.03 trillion (S$18 billion).

As alluded to earlier in the discussion on FDI in Chapter 2, road and highway development are eligible for 100 per cent FDI under the automatic route. The Central Road and Infrastructure Fund (CRIF) Act of 2000 has been amended, making the central government responsible for formulating criteria for tendering state road projects too. State governments get funds for the development and maintenance of state roads under the CRIF, for roads that are not national highways, but deemed to be under the Economic Importance & Interstate Connectivity (EI&ISC) schemes. Funds for developing and maintaining national highways include the CRIF cess, toll revenue, budgetary support including external aid, funds raised through monetisation of national highways and special purpose vehicles, internal and extra-budgetary resources and private investment.

The NHAI is expected to award projects worth ₹2.2 trillion (S$41 billion) with a total length of approximately 5,000 km in FY2022.

Around 200,000 km of national highways are expected to be completed by 2022. By August 2021, the Ministry of Road Transport and Highways has constructed national highways of 3,335 km compared with 3,322 km in August 2020. In the first half of FY2022, the ministry-run National Highways Authority of India (NHAI), a parastatal entity, has awarded 1,330 km of highways, which is 1.6x of the total awards in FY2020 and 3.5x of the FY2019 levels. The NHAI is expected to award projects worth ₹2.2 trillion (S$41 billion) with a total length of approximately 5,000 km in FY2022.

The central government is developing five Greenfield Expressways and 17 Access Controlled Highways comprising a combined length of 8,142 km in Bharatmala Pariyojana Phase-I. Out of these, 1,025 km length has been completed, and in 1,242 km length construction work

is going on. Works in the length of 1,726 km have been awarded. The remaining length is in different stages, such as bidding/DPR stages.

The development of different types of corridors/expressways in Bharatmala will optimise the efficiency of the movement of goods and people across the country through the adoption of a coherent corridor approach based on the Origin-Destination (O-D) principle. The O-D principle seeks to connect the production with the consumption centres and will enable the connection of all 550 Districts in the country through the national highway linkages. The initiative should have a significant positive impact on the country's Logistic Performance Index.

The O-D principle seeks to connect the production with the consumption centres and will enable the connection of all 550 Districts in the country through the national highway linkages.

All expressway projects are targeted for completion by the year 2024-25 (Table 3.1). As of now, three foreign agencies, namely Dhaya Maju Infrastructure (Asia) Sdn Berhad (DMI), JiangXi Construction Engineering (Group) Corporation Limited & OJSC Euro-Asian Construction Corporation Evrascon are involved in the construction of Delhi-Mumbai Expressway and Delhi-Amritsar-Katra Expressway in collaboration with Indian infrastructure companies Crescent EPC Projects & Technical Services Limited (JV with DMI for Delhi Mumbai Expressway) and MKC Infrastructure Limited (JV with JiangXi for Delhi-Mumbai Expressway and OJSC Evrascon for Delhi-Amritsar-Katra Expressway).

Table 3.1: Progress on Expressways

Expressways	Total length (km)	Length completed (km)/ (Implemented [km])	Balance for the award (km)
Delhi Mumbai EXP	1,291	350/(764)	177
Delhi Amritsar Katra EXP	672	(349)	323
Ahmedabad – Dholera EXP	109	(109)	-
Bengaluru – Chennai EXP	262	(71)	191
Kanpur – Lucknow EXP	63	-	63
Dwarka EXP	28	12	16
Delhi – Meerut EXP	82	82	-

Source: www.nhai.gov.in

Telecommunication and Digital Sector

The total number of internet subscribers in India was more than 780 million in May 2021.

India is the world's second largest telecommunications market, with a subscriber base of 1.16 billion. The Indian mobile economy is growing rapidly and will contribute substantially to India's GDP in the foreseeable future.[23] The total number of internet subscribers in India was more than 780 million in May 2021.

The National Digital Communications Policy-2018 (NDCP-2018) has been implemented since 2018 to support India's transition to a digitally empowered economy and society. The Policy was notified in October 2018 with a vision to fulfilling the information and communication needs of the citizens and enterprises through the establishment of a ubiquitous, resilient and affordable Digital Communication Infrastructure and Services. The NDCP-18 envisages three missions:

i. Connect India – Creating a robust digital communications infrastructure;
ii. Propel India – Enabling next-generation technologies and services through investments, innovation and intellectual property rights (IPR) generation; and
iii. Secure India–Ensuring sovereignty, safety and security of digital communications.

The NDCP aims to attract investments of US$100 billion (S$137 billion) in the digital communications sector. Investments are being visualised in the BharatNet project to be implemented in a phased manner to provide broadband connectivity to all village panchayats (Heads) in the country. Also, till 2021, the central government had auctioned spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, and 2500 MHz bands. The spectrum acquired through auctions can be used by the Telecommunication Service Providers (TSPs) for

[23] Various details about the growth of India's mobile economy and its contribution to the country's GDP is reflected in a study by the Boston Consulting Group (BCG) and the GSM Association (GSMA). https://cio.economictimes.indiatimes.com/news/internet/digital-payments-industry-to-hit-500-bn-by-2020-gsma-bcg/57304310.

deployment of any International Mobile Telecommunications (IMT) technology, including 4G and 5G, as per their network/business plans.

The government has enabled easy market access to telecommunication equipment and created a fair and proactive regulatory framework for ensuring the availability of telecommunication services to consumers at affordable prices. The deregulation of foreign direct investment (FDI) norms has made the sector one of the fastest growing and among the top five employment opportunity generators in the country. Over the next five years, a rise in mobile phone penetration and a decline in data costs will add 500 million new internet users in India, creating opportunities for new businesses.

Over the next five years, a rise in mobile phone penetration and a decline in data costs will add 500 million new internet users in India, creating opportunities for new businesses.

On 30 June 2021, the scope of BharatNet was extended to all inhabited villages beyond panchayats. The target date for the completion of the project is August 2023. More than 1,50,000 panchayats have been made 'service-ready' in the country.

The National Telecommunication Policy, in the meanwhile, has facilitated several structural and process reforms. These are expected to significantly encourage investments in the sector.

1. Licence Agreements have been amended to exclude non-telecommunication revenue from Adjusted Gross Revenue (AGR).

2. The Financial Bank Guarantee (FBG) requirement against Licence Fee and other dues not otherwise securitised, as well as Performance Bank Guarantees (PBGs), has been reduced to 20 per cent of the current stipulated requirement.

3. The central government has rationalised the interest rate on delayed payments by the TSPs. Any delayed payments of Licence Fee and Spectrum Usage Charge (SUC) will attract interest at the rate of State Bank of India (SBI) Marginal Cost of Lending Rate (MCLR) plus two per cent, instead of MCLR plus four per cent earlier. The penalty for a shortfall in payment of Licence Fee and SUC dues by TSPs has been removed.

4. Spectrum auctions will be held normally in the last quarter of every financial year. Whenever necessary, they can be held at shorter intervals also.

For future spectrum auctions, the TSPs will not be required to submit bank guarantees to securitise spectrum auction instalment payments.

5. For future spectrum auctions, the TSPs will not be required to submit bank guarantees to securitise spectrum auction instalment payments.

6. There will be no Spectrum Usage Charge (SUC) for spectrum taken in future auctions.

7. The central government has given a moratorium of four years for annual payments of dues arising out of the Honourable Supreme Court's AGR judgement. The Net Present Value (NPV) of the due amounts has been protected.

8. An option has been given to the TSPs to pay the interest amount arising due to the deferment of payment of AGR dues and spectrum auction instalments, by way of equity.

9. To encourage investment, 100 per cent FDI under the automatic route has been permitted in the Telecommunication Sector.

As mentioned earlier, 100 per cent FDI through the automatic route is now permitted in telecommunication.

Tariff

Tariffs for telecommunication services are under forbearance except for leased circuits, national roaming, rural fixed-line services and mobile number portability. The service providers have the flexibility to design and offer tariffs by considering several factors, including input costs, level of competition, their understanding of the prevailing market situation, and commercial interest.

5G Services

At the time of writing this report, 5G services were yet to commence in India. However, the Department of Telecommunications (DoT) granted permission to telecommunication service providers – Bharti Airtel Ltd., Reliance JioInfocomm Ltd., Vodafone Idea Ltd., and Mahanagar Telephone Nigam Limited to conduct 5G Technology – trials with a validity period of six months. The DoT, in March 2018, approved a multi-institute collaborative project to set up an indigenous 5G Test Bed at a total cost of ₹2.24 billion (S$40 million).[24] The project envisages setting up an end-to-end open 5G Test Bed in a distributed architecture model. It enables Indian academia and industry to validate their products, prototypes, and algorithms and provides facilities for experimenting and demonstrating 5G applications/ use cases.

The project envisages setting up an end-to-end open 5G Test Bed in a distributed architecture model.

Security

The DoT has amended telecommunication licences from March 2021, wherein all licensees have been directed to connect only trusted products in their telecommunication networks with effect from 15 June 2021. The amendment has been issued to implement the provisions of the National Security Directive on the Telecommunication Sector (NSDTS). It aims to establish a mechanism for sourcing telecommunication equipment only from trusted sources. A portal has been launched which facilitates the evaluation of telecommunication equipment as trusted products and intimation of the same to the licensees.

[24] The collaborating institutes include IIT Madras, IIT Delhi, IIT Hyderabad, IIT Bombay, IIT Kanpur, IISc Bangalore, Society for Applied Microwave Electronics Engineering & Research (SAMEER) and Centre of Excellence in Wireless Technology (CEWiT).

Logistics, Ports and Shipping

Logistics

There is no official estimate of the logistics cost in India. Armstrong & Associates Inc. estimates logistics cost in India at 13 per cent of GDP, which is higher than that for most of the developed countries (less than 10 per cent).[25] The fast growth of the retail sector has generated great demand for logistics.

It is expected that in the next few years, the logistics sector will have undergone major changes, offering a wide spectrum of services.

Domestic logistics companies are planning significant investments to expand their portfolio of services. It is expected that in the next few years, the logistics sector will have undergone major changes, offering a wide spectrum of services. Although some retailers, like Reliance, may have their own logistics subsidiaries, most of the others are working with third-party providers.

In 2017, the Cabinet Committee on Economic Affairs (CCEA) mandated the Ministry of Road Transport and Highways to develop the 35 Multimodal Logistics Parks (MMLP) across the country. These are being developed under the Public-Private Partnership (PPP) on Design, Build, Finance, Operate and Transfer (DBFOT) model.[26]

The draft National Logistics Policy is currently being discussed by stakeholders. The vision of the proposed policy is to drive economic growth and the business competitiveness of the country through an integrated, seamless, efficient, reliable, green, sustainable, and cost-effective logistics network leveraging the best in technology, processes, and skilled manpower.

The proposed policy aims to reduce national logistics costs to 9 -10 per cent of the GDP. This will be achieved by several policy initiatives

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[25] https://www.3plogistics.com/3pl-market-info-resources/3pl-market-information/global-3pl-market-size-estimates/.

[26] Logistics Infrastructure" is part of the Harmonised Master List of Infrastructure Sub-sectors. It includes Multimodal Logistics Park comprising Inland Container Depot (ICD) with minimum investment of ₹₹500 million and minimum area of 10-acre, Cold Chain Facility with minimum investment of ₹₹150 million and minimum area of 20,000 sq ft and/or Warehousing Facility with investment of minimum ₹₹250 million and minimum area of 100,000 sq ft.

involving rail transport, road transport, inland waterways, coastal shipping and streamlining regulatory procedures.

To have an integrated approach to logistics, a separate division has been created in the Department of Commerce to coordinate various logistics initiatives of the central government. The draft Logistics Policy envisages an IT-enabled geospatial approach to integrate the efforts of various ministries in infrastructure planning and its optimal utilisation. The National Logistics Platform will be a unified interface for all logistics services with integrated digital solutions developed by different ministries, agencies and private entities in the logistics sector through open Application Programming Interfaces.

The draft Logistics Policy envisages an IT-enabled geospatial approach to integrate the efforts of various ministries in infrastructure planning and its optimal utilisation.

To reduce logistics costs and improve external trade facilitation, the Department of Revenue in the Ministry of Finance has taken several initiatives. These include:

a) SWIFT (Single Window Interface for Trade).
b) Adoption of Digital Signature.
c) 24x7 Customs Clearance – for facilitated Bills of Entry and factory-stuffed containers and goods exported under free shipping bills at select ports.
d) Import Data Processing and Management System (IDPMS) – jointly launched with RBI to facilitate efficient data processing for payment of imports and effective monitoring.
e) E-Sanchit.
f) Two new IT Modules ICEDASH (that is, ease of doing business monitoring dashboard) and ATITHI app for electronic filing by passengers for baggage.

Ports and Shipping

On 1 May 2020, the central government constituted a Working Group for a comprehensive study on the current practices of ports and shipping logistics management. The Group will:

i. Study current practices of ports and shipping logistics management in the oil and gas industry and identify the areas of intervention for de-bottlenecking of operational issues.
ii. Strengthen ports and shipping logistics management and envisage a future road map.

To strengthen the coastal infrastructure to streamline the logistics management of the oil and gas sector, the following policies have been undertaken:

i. Construction of a new Captive Jetty at Kamrajar Port, Ennore (Chennai) and a grassroots POL Terminal at Vallur (Chennai), along with associated PL connectivity with the new Captive Jetty and Chennai Petroleum Corporation Limited (CPCL).
ii. Augmenting coastal receipt facility at the Mangaluru Terminal for construction of additional tankage of around 67,000 kilolitres.
iii. Augmenting coastal receipt facilities at the Jawaharlal Nehru Port Trust (JNPT), Mumbai Terminal for receiving larger size coastal parcels.
iv. Augmenting LPG import terminal at Kandla from 0.6 to 2.5MMTPA.
v. Setting up of LPG Import Terminal at the Paradip port.
vi. Signing MoU with Mundra LPG Terminal Pvt. Ltd. for import of LPG to meet the increasing domestic demand, particularly in land-locked northern India.
vii. Kandla Gorakhpur LPG Pipeline for efficient and fast turnaround of vessels for meeting the high domestic LPG demand.

Out of these, developmental activities have been taken up in 13 NWs.

To promote inland water transport movements in the country, 111 waterways have been declared as National Waterways (NWs) under the National Waterways Act, 2016, which came into effect on 12 April 2016. Based on the outcome of techno-economic feasibility and detailed reports, the Inland Waterways Authority of India (IWAI) has concluded that 23 NWs have been found viable for cargo movement. Out of these, developmental activities have been taken up in 13 NWs.

Gati Shakti Yojana

Continuing the push for infrastructure and logistics, the central government has announced a ₹1 trillion (S$18 billion) *'Gati Shakti'* master plan.

In this Plan, all existing and proposed economic zones have been mapped along with the multimodal connectivity infrastructure in a single platform. Individual projects of different line Ministries would be examined and sanctioned within the parameters of the plan. The National Master Plan will employ modern technology and the latest IT tools for coordinated planning of infrastructure.[27] Digitisation will play a big role in ensuring timely clearances and flagging potential issues and in project monitoring as well. It will also leverage technology extensively, including spatial planning tools with ISRO's satellite imagery, for real-time monitoring of projects.

The National Master Plan will employ modern technology and the latest IT tools for coordinated planning of infrastructure.

The scope of the GSY has been further expanded and elaborated in the Union Budget presented on 1 February 2022. These are elaborated in Box 3.1.

The project will provide a linked platform for rolling out various infrastructure projects as part of a grandmaster plan. Cognisant of the multiplier effects that will accrue to the economy through infrastructure spending, the project is expected to contribute directly through increased demand for labour and construction materials, and through the second-order effects that improved connectivity would facilitate.

One of the major benefits of the project is the breakdown of the silo culture by ensuring that different ministries work in sync with each other and that departments do not roll out their plans and programmes irrespective of the linkages. This will also ensure optimal utilisation of allocable resources.

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[27] Pertinent examples include a GIS-based Enterprise Resource Planning system with 200+ layers for evidence-based decision-making and use of satellite imagery for monitoring.

The *Gati Shakti* portal will highlight all clearances required by new projects based on their locations and allow stakeholders to apply for these clearances from the relevant authority directly on the portal. The objective is to streamline the process and shorten the time for clearances.

Gati Shakti also aims to institutionalise holistic planning for major infrastructure projects. The projects will be designed and executed with a common vision and incorporate the infrastructure schemes of various ministries and state governments, such as the Bharatmala[28] road project, Sagarmala[29] waterways plan, ports and the UDAN[30] scheme.

By incorporating infrastructure schemes under various ministries and state governments, the Gati Shakti platform will boost last-mile connectivity.

Currently, several economic zones and industrial parks are below their full productive potential due to inefficient and fragmented multi-modal connectivity. By incorporating infrastructure schemes under various ministries and state governments, the *Gati Shakti* platform will boost last-mile connectivity.

The National Master plan will help to avoid inefficient infrastructure implementation overlaps. For instance, if a railway line is being built, the Ministry of Road Transport would give clearance for an overpass and the power ministry can begin projects to ensure that trains can have access to power upon completion of the tracks. It will also avoid negative externalities created by poor Infrastructure planning.[31]

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28 It calls for greater efficiency of existing corridors through development of Multimodal Logistics Parks and elimination of choke points. A road network that will connect 550 Districts in the country through NH linkages.

29 The Sagarmala project aims to transform existing ports into modern world-class ports and integrate the development of ports, industrial clusters and hinterland and efficient evacuation systems through road, rail, inland and coastal waterways.

30 The scheme envisages providing connectivity to un-served and underserved airports of the country through the revival of existing airstrips and airports. The scheme is operational for a period of 10 years.

31 For example, newly built roads are being dug up by the water department to lay pipes and construction of different tunnels for roads and railways in the same area.

Box 3.1: Gati Shakti Yojana In Union Budget 2022

The Union Budget announced a series of initiatives as part of the Prime Minister's GatiShakti National Master Plan. All the initiatives are focused on enhancing seamless and efficient multimodal connectivity in the country for bringing down logistics costs through greater capacity and higher operational efficiency. The initiatives are as follows.

Roads: The national highways network will be expanded by 25,000 km in 2022-23. An amount of ₹200 billion (S$3.5 billion) will be mobilised for complementing public resources.

Movement of goods and people: For efficient movement of goods through different modes, data exchange among mode operators will be brought on Unified Logistics Interface Platform (ULIP) designed for API. Open-source mobility stack will be facilitated for seamless travel of passengers.

Railways: One hundred PM Gati Shakti cargo terminals will be developed for multi-modal logistics facilities during the next 3 years. Railways will initiate efforts for integrating with postal services for seamless delivery of parcels. Four hundred new generation Vande Bharat trains with better efficiency will be introduced in the next three years.

Four hundred new generation Vande Bharat trains with better efficiency will be introduced in the next three years.

Multimodal logistic parks: PPP contracts for these parks will be awarded in 2022-23.

Mass urban transport and railway connectivity: Projects emphasising multimodal connectivity between urban metro rapid transit systems and the railway networks will be taken up on a priority basis. This will include new designing and restructuring of metro stations.

National ropeways development programme: The programme will be taken up on a PPP mode for promoting ecologically sustainable connectivity in hilly areas. Contracts for 8 ropeway projects covering 60 km will be awarded in 2022-23.

Capacity-building: The Capacity Building Commission will provide technical support to central ministries, state governments and their infrastructure bodies for upgrading skills for capacity in planning, design, financing (including innovative ways) and implementation management of the PM GatiShakti infrastructure projects.

National Monetisation Pipeline

It is designed to unlock the value of investments in brownfield public sector assets by tapping institutional and long-term capital.

The NMP is one of the innovative ways of mobilising resources for the NIP. It is designed to unlock the value of investments in brownfield public sector assets by tapping institutional and long-term capital. It will establish structured contractual partnerships between the central government and private players for generating sustainable infrastructural funding by monetising core brownfield infrastructural assets, that is, operating infrastructure assets. The main aspects of the scheme are as follows:

1. Government-owned roads, railways, power plants, gas pipelines, airports, ports and warehouses will be leased out for a specified period to non-government entities.
2. Assets that would be monetised are "de-risked" from execution risks to encourage private investment.
3. Monetisation is only for the operating and maintenance rights of assets, not their ownership. There will be no land sale to private players.
4. The NMP will be implemented over the next four years.
5. The central government aims to attract investments to the tune of ₹6,000 billion (S$106 billion) by monetising its core assets in 13 strategic sectors through this pipeline.
6. All assets, whose rights are transferred, will run on the Public-Private Partnership (PPP) model.[32]

[32] These will include Operate Maintain Transfer (OMT), Toll Operate Transfer (TOT) and Operations, Maintenance & Development (OMD). OMT and TOT have been used in highways sector while OMD is being deployed in case of airports. Real estate investment trusts (REITs) and infrastructure investment trusts (InvITs) are the key structures to be used in the roads and power sector.

While the NMP currently includes only assets under central government line ministries and Central Public Sector Enterprises (CPSEs), the process of coordinating asset pipelines of respective Indian states is simultaneously ongoing. A sector-wise breakdown of the NMP is in Table 3.2.

Table 3.2: NMP: Sectoral Breakdown

Sector	Monetisation Asset Details
Roads	Road assets aggregating 26,700 km, comprising 22 per cent of National Highways to be monetised over the next four years. The government is expecting to raise ₹1,600 billion (S$28 billion)) through potential models like Toll Operate Transfer (ToT) and Infrastructure Investment Trust (InvIT).
Railways	Assets having an indicative value of ₹1,525 billion (S$27.01 billion) over the next four years. The key rail assets identified include 400 railway stations, 90 passenger trains, one route of 1400 km railway track, 741 km of Konkan railway, 15 railway stadiums and selected railway colonies, 265 railway-owned goods sheds and four hill railways.
Power transmission	Investments worth ₹452 billion (S$8 billion) are to be monetised. These aggregate to 28,608 circuit km, including transmission assets of 400 kilovolts (KV) and above of the Power Grid Corporation of India Limited (PGCIL). PGCIL assets include long-distance transmission assets, which comprise an assortment of tariff-based Competitive Bidding (TBCB) and Regulated Tariff Mechanism (RTM) assets. Factors like transmission charges, asset availability and asset mix will determine the assets to be monetised. The indicative monetisation value has been considered based on a factor of ₹15.8 million (S$279,817) per circuit km.
Power generation	An asset base of six gigawatts (GW) worth ₹398 billion (S$7 billion). Key entities whose assets have been considered are National Hydroelectric Power Corporation (NHPC), National Thermal Power Corporation Limited (NTPC) and the Satluj Jal Vidyut Nigam Limited (SJVNL) who own the bulk of the hydel assets and NTPC and Neyveli Lignite Corporation Ltd (NLC) that own renewable assets.
Natural gas pipelines	Gas pipelines with an aggregate length of 8,154 km, of which 7,928 km are from existing operational pipelines and the rest from pipelines to become operational during the NMP period (FY2022-FY2025). The assets are to fetch ₹244.62 billion (S$4 billion).
Petroleum, petroleum product pipelines and other assets	Assets to mobilise ₹225 billion (S$4 billion). The asset classes identified include 733 km LPG pipelines, 3196 km petroleum product pipelines, two hydrogen generation plants and ESG assets (effluent treatment plants, sulphur recovery units, flare gas recovery systems).

Urban real estate	Monetisation of assets to the tune of ₹150 billion (S$3 billion). These include housing or commercial units on a 240-acre plot of land in Ghitorni in Delhi and the recognised redevelopment of seven General Pool Residential Accommodation (GPRA) colonies in Delhi.[33]
Hospitality	Eight hotels of India Tourism Development Corporation (ITDC)[34] to be monetised through different routes like long-term leasing, divestment, long-term OMT (operate, maintain and transfer) contracts, etc., on a case-to-case basis.
Telecommunication	The monetisation of telecommunication assets worth ₹351 billion (S$6 billion). The indicative valuation is for fibre & tower assets of Bharatnet.
Warehousing	Assets of Food Corporation of India (FCI) and central Warehousing Corporation (CWC), worth ₹289 billion (US$4 billion).
Mining	Coal mining assets worth ₹287.5 billion (S$5 billion) over the NMP period. 160 coal mining assets have been identified, which include 17 projects based on the Mine Developer and Operator (MDO) model, three washeries based on the Build, Own, Operate (BOO) model, 35 identified first-mile connectivity projects for building coal silos/ mechanised loading, one coal gasification plant and commercial auction of coal mines.
Aviation	25 Airport Authority of India (AAI) managed airports[35] by FY2025 for raising ₹207.8 billion (S$4 billion).
Shipping	31 shipping assets worth ₹128 billion (S$2 billion) over four years. The Ministry of Ports will employ the PPP model.
Stadiums	Two national stadiums, including the Jawaharlal Nehru stadium and two regional centres worth ₹114.5 billion (S$2 billion).

Source: Compiled from the National Monetisation Pipeline: Volume II Asset Pipeline report by NITI Aayog, Government of India; https://www.niti.gov.in/sites/default/files/2021-08/Vol_2_NATIONAL_MONETISATION_PIPELINE_23_Aug_2021.pdf

National Bank for Financing Infrastructure and Development

Indian infrastructure has been heavily bank-financed since the country's bond markets are not adequately deep and liquid. Against this backdrop, the NIP aims to invest ₹100 trillion (S$1.2 trillion) in the infrastructure sector by 2024-25. This, in addition to the NMP, is another route for raising funds for the NIP. Raising the capital at

33 These seven colonies are Sarojini Nagar, Naoroji Nagar, Netaji Nagar, Sriniwaspuri, Thyagraj Nagar, Mohammadpur and Kasturba Nagar in Delhi.

34 The eight hotels are Hotel Pondicherry, Puducherry; Hotel Kalinga, Bhubaneshwar; Hotel Ranchi, Ranchi; Hotel Nilachal, Puri; Hotel Anandpur Sahib, Rupnagar; Hotel Samrat, New Delhi; Hotel Ashok, New Delhi; and Hotel Jammu Ashok, Jammu.

35 Includes Varanasi, Udaipur, Dehradun, Indore, Ranchi, Coimbatore, Jodhpur, Vadodara, Patna, Vijayawada, Chennai, Nagpur and Bhubaneshwar.

the least cost will require policy interventions including establishing a DFI[36] to avoid excessive reliance on banks.

The DFIs have been valuable institutions in providing long-tenor credit to aid development projects in many countries across the world. India had several DFIs and refinancing institutions such as ICICI, IDBI, IFCI, NABARD and SIDBI in the initial decades, post-independence to cater to sectoral development financing requirements. Their contributions to term lending, project finance and financial consultancy services were significant and visible till they became unviable and converted into universal banks in the early 1990s.

The NaBFID has been set up as a corporate body with an authorised share capital of ₹1 trillion (S$18 billion). Initially, the central government will own 100 per cent shares of the institution which may subsequently be reduced to 26 per cent.[37]

Initially, the central government will own 100 per cent shares of the institution which may subsequently be reduced to 26 per cent.

The NaBFID will serve two specific objectives. These are:

1. The developmental objective of playing a key role in facilitating institutional reforms for developing long-term non-recourse infrastructure financing including the bonds and derivatives market for infrastructure financing.

2. The financing objective of investing in or lending to infrastructure projects, a role akin to traditional DFIs.

The NaBFID can attract fresh equity from investors without recourse to fiscal support, unlike earlier DFIs. To achieve this outcome, the Act explicitly provides an option to reduce central government shareholding in the NaBFID from 100 to 26 per cent over time. Full government ownership would initially help NaBFID build credibility. Subsequently, the statutory structure could accommodate institutional investors including multilateral agencies as significant shareholders.

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36 DFIs are set up for providing long-term finance for such segments of the economy where the risks involved are beyond the acceptable limits of commercial banks and other ordinary financial institutions. Unlike banks, DFIs do not accept deposits from people. They source funds from the market, government, as well as multi-lateral institutions and are often supported through government guarantees.

37 Shares of the NaBFID may be held by the central government, multilateral institutions, sovereign wealth funds, pension funds, insurers, financial institutions, banks and other institutions prescribed by the central government.

The NaBFID has been consciously designed as a board-driven institution run on business principles. Up to three directors could be appointed by the significant non-government shareholders in the NaBFID. The central government unilaterally does not have the power to appoint or remove most of the directors on the board.[38]

The central government can prescribe the key performance indicators based on which the review may be conducted.

The Act for the NABFID raises the bar on its accountability. Its performance would be reviewed every five years by an external agency to be appointed by the central government. The central government can prescribe the key performance indicators based on which the review may be conducted.

The Act for the NaBFID also acknowledges the role of competition in lowering the cost of capital in infrastructure financing. It allows RBI to licence multiple private DFIs to compete with the NaBFID. Stiff competition, along with performance reporting, is designed to create strong incentives for the NaBFID to perform irrespective of its statutory privilege.

The functions of the NaBFID include:

a. Extending loans and advances for infrastructure projects;
b. Taking over or refinancing such existing loans;
c. Attracting investment from private sector investors and institutional investors for infrastructure projects;
d. Organising and facilitating foreign participation in infrastructure projects;
e. Facilitating negotiations with various government authorities for dispute resolution in the field of infrastructure financing; and
f. Providing consultancy services in infrastructure financing.

The NaBFID can raise money in the form of loans or otherwise both in Indian rupees and foreign currencies, or secure money by the issue and sale of various financial instruments including bonds and debentures. It may also borrow money from the central government, Reserve Bank of India (RBI), Scheduled commercial banks, mutual

[38] To attract top talent, the NaBFID is resourced to pay market-level salaries to top management and employees. The Act for setting up the NaBFID also mandates prior sanctions for initiating any investigation or prosecution against any director or employee of the NaBFID. These provisions are intended to enable the NaBFID to make decisions based on commercial considerations alone.

funds and multilateral institutions (for example, the World Bank and the Asian Development Bank [ADB]).

Renewable Energy, Green Hydrogen and Green Bonds

India has ratcheted up steps towards its renewable energy commitments with several policy announcements coming within the current financial year. At the COP26 in Glasgow in November 2021, Prime Minister Narendra Modi announced a higher renewable energy commitment of 500 GW for 2030.

Prime Minister Narendra Modi announced a higher renewable energy commitment of 500 GW for 2030.

India has announced a variety of incentives for expanding production of renewable energy. These include:

- 100 per cent FDI under the automatic route.
- Waiver of Inter-State Transmission System (ISTS) charges for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025.
- Declaration of trajectory for Renewable Purchase Obligation (RPO) up to 2022.
- Setting up ultra-mega Renewable Energy Parks to provide land and transmission to developers on a plug-and-play basis.
- Incentives for laying new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme.
- Setting up a Project Development Cell for attracting and facilitating investments.
- Announcing standard bidding guidelines for tariff-based competitive bidding process for solar PV and wind projects.
- Allowing dispatch of power against a Letter of Credit (LC) or advance payment to ensure timely payment by distribution licensees to renewable energy generators.

The Green Hydrogen Policy and the initiative on Green Bonds are important additions to the focus on developing capacities for renewable power. These focus on developing hydrogen and ammonia as a major source of renewable energy and mobilising finance for supporting renewable energy projects.

Green Hydrogen/Green Ammonia Policy

The green hydrogen policy was announced on 17 February 2022.[39] This policy will be an important component of the National Hydrogen Mission announced by the Prime Minister on 15 August 2021. The core elements of the policy are in Box 3.2.

This is consistent with projected demands for industry and power generation.

The Policy makes a compelling case for domestic manufacturers such as the Indian Oil Corporation (IOC), Reliance Industries Limited (RIL) and others to expand hydrogen production. Most of them have responded positively by announcing ambitious targets for scaling up production. This is consistent with projected demands for industry and power generation.[40]

Steel, shipping, heavy industries, civil aviation and, most significantly, road transport and highways are major potential users of hydrogen. Compared to solar, hydrogen is not energy-efficient for running light vehicles. However, it can be economical for trucks and ships and is a sustainable fuel for steel, fertiliser and cement industries compared with other renewable energy sources.

Box 3.1: Core Elements of the Green Hydrogen Policy

- Green Hydrogen/Ammonia manufacturers will be able to purchase renewable power from power exchanges or set up renewable energy capacity themselves anywhere. They will be granted open access within 15 days of applying.
- Producers will be able to bank unconsumed renewable power with the distributors for up to 30 days and take it back when required.
- Distribution licensees will be able to procure and supply renewable energy to green Hydrogen producers in their

39 'Ministry of Power notifies Green Hydrogen/Green Ammonia Policy', Press Information Bureau, 17 February 2022, https://pib.gov.in/PressReleasePage.aspx?PRID=1799067#:~:text=Hon'ble%20Prime%20Minister%20launched,15th%20August%2C%202021).&text=This%20will%20help%20in%20meeting,development%20of%20renewable%20energy%20capacity.

40 A S&P Platts report predicts that by 2030 hydrogen demand for industry and power generation will make up 43.8 per cent and 24.5 per cent of annual fuel consumption in India.

States at concessional prices. The latter will include procurement cost, wheeling charges and a small margin decided by State Commissions.

- Inter-state transmission charges will be waived for 25 years for Green Hydrogen and Green Ammonia projects commissioned before 30 June 2025.
- Green Hydrogen/Ammonia plants will be given grid connectivity on priority basis.
- Renewable Purchase Obligation (RPO) incentive will be available for manufacturers and distribution licensees for consumption of renewable power.
- Producers will be facilitated through a single portal set up by Ministry of New and Renewable Energy (MNRE) for obtaining statutory clearances in time.
- Generation end and manufacturing end connectivity, for inter-state transmission services, will be granted on priority.
- Manufacturers shall be allowed to set up bunkers near Ports for storage of Green hydrogen/ammonia for exports. The land for storage shall be provided by the respective Port Authorities at applicable charges.

Green Bonds

The latest Union Budget announced on 1 February 2022 announced India's decision to issue sovereign green bonds. A sovereign green bond would position India as a prominent leader in this category of financial product for raising finance for green projects among the major emerging markets. The proceeds from the bonds will be used by public sector enterprises to reduce the carbon intensity of the economy.

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The bonds are slotted to be issued as part of the first half year's central government borrowing programme. The immediate incentive

is to tap into lower-cost funds than would be available for a plain vanilla debt issue. Yields on Indian paper have hardened to nearly seven per cent denoting less earnings for investors. The green bonds issue is expected to reverse the trend. More such issues are possible depending on how the markets react.

The green bonds also overtake earlier plans to push for India's inclusion in global bond indices. The government reckons that the new papers could make foreign investors subscribe to Indian papers at a comparable scale as the inclusion in fund indices would have done.

The IFSCA and the GIFT City

In the meantime, the Indian financial market has grown and become more complex.

Since 2005, India has endeavoured to develop an international financial centre, mostly in Mumbai. However, a combination of acute infrastructure shortage in the city and the regulatory turf wars between the RBI, the finance ministry and other stakeholders ensured the project could never take off. In the meantime, the Indian financial market has grown and become more complex. However, the banking sector has not developed enough to cater to the needs of the US$2.6 trillion economy. Most of the major companies depend on overseas financial markets for their banking needs, while the small and medium enterprises must face higher interest costs domestically, because of the relatively small size of the financial sector. Other parts of the financial sector, however, have expanded fast.[41] It is this asymmetry that has made the IFSCA and the concept of the Gujarat International Finance Tec (GIFT) city very necessary as a one-stop regulator and, under it, an integrated business centre for the financial sector.

[41] As of August 2021, assets of the mutual funds industry stood at ₹36.59 trillion (US$493 billion), and the total number of accounts stood at 108.5 million. Indian Insurance industry has also been expanding at a fast pace. The total first year premium of life insurance companies reached ₹2.59 trillion (US$37 billion) in FY2020. In FY2021, US$4.25 billion was raised across 55 initial public offerings (IPOs). In FY2021, the number of listed companies on the NSE and BSE were 1,920 and 5,542, respectively. Data with the Futures Industry Association (FIA), a derivatives trade association shows that the National Stock Exchange of India Ltd ranks as the world's largest derivatives exchange in 2020 in terms number of contracts traded. NSE was ranked 4th worldwide in cash equities by number of trades. (World Federation of Exchanges, CY2020). An IBEF report notes that India's mobile wallet industry (fintech) is estimated to grow at a CAGR of 150 per cent to reach US$4.4 billion by 2022, while mobile wallet transactions will touch ₹32 trillion (US$$ 493 billion) during the same period. A Goldman Sachs report notes India's stock market size will cross US$5 trillion, will surpass the UK and become the fifth-largest stock market worldwide by 2024.

The International Financial Services Centre Authority (IFSCA) was established under the IFSCA Act 2019 by the government of India. It has come up to run the GIFT city located on 886 acres of land located between the commercial capital of Gujarat state, Ahmedabad, and its administrative capital, Gandhinagar.

Identified as a central Business District, the GIFT city includes 62 million square feet (sq ft) of built-up area, which includes office spaces, residential apartments, schools, hospitals, hotels, clubs, retail and various recreational facilities.

The regulatory body to run the business of the GIFT city shall be IFSCA. As per the act, it has been established as a unified regulator to develop and regulate financial products, financial services and financial institutions in the International Financial Service Centres (IFSCs) in India.

The IFSCA proposes to enact an all-encompassing framework to facilitate issuers' access to global capital. It has been empowered under the 2019 act to offer a unified platform for the development and regulation of financial products, financial services and financial institutions in the areas of banking, insurance, securities and funds management. Tax concessions are also being made available.[42]

Tax concessions are also being made available.

More details about the initiative are in Annexure 3.1.

The Union Budget, announced on 1 February 2022, allows world-class foreign universities to set up bases in the GIFT City and offers a variety of courses (for example, financial management, fintech, engineering and mathematics). These courses would not be subject to any domestic regulations, except those of the IFSCA.

The 2022 Budget also announced the establishment of an international arbitration centre in the GIFT city for quick disposal of disputes under international jurisprudence and establishing services for raising capital for sustainable and climate finance.

[42] More details are at https://incorpadvisory.in/blog/tax-incentives-announced-in-budget-2021/#:~:text=4%20%25%20withholding%20tax%20(excluding%20surcharge,Funds)%20setup%20in%20Gift%20City.)

State Policies

This chapter reviews the contents of major policies announced and implemented by five state governments in India that are being studied in this report. These states are Gujarat, Tamil Nadu, Karnataka, Maharashtra and Uttar Pradesh (UP).[43]

The details of industrial policies of the five states – captured through policies for infrastructure, research and innovation, thrust sectors, facilitation and links/key resources – are available in Annexures 4a) i) to 4a) v) respectively.

The two other segments of state policies that have been studied in detail in the report are clean energy policies and electric vehicle policies.

The two other segments of state policies that have been studied in detail in the report are clean energy policies and electric vehicle policies. The clean energy policies are mentioned in detail in Annexures 4b) i) and 4b) ii). Similarly, electric vehicle policies are discussed in Annexure 4c) i) and 4c) ii).

The rest of the chapter is devoted to a closer description and understanding of the state policies.

Gujarat

Industrial Policy 2020

Infrastructure

Financial incentives would be provided for developing industrial infrastructure, including industrial parks. A key part of the effort, in this regard, would be to facilitate industries in obtaining 'government Land'. The latter would be leased to industrial enterprises at 6 per cent of the market rate for up to 50 years.

[43] The S$ equivalent of all INR figures have been reported on the prevailing S$-INR exchange rate.

The state government has established "GARUD", Gandhinagar Railway & Urban Development Corporation Limited, to ensure easy movement of goods (inter & intra) state and increase exports. GARUD will be an organisation that will aim to create an effective infrastructure for reducing the cost of doing business.

Within infrastructure building, there is a strong emphasis on sustainable development. Specific financial incentives would be provided for enterprise efforts to reduce air and water pollution and compliance with environmental standards.

Within infrastructure building, there is a strong emphasis on sustainable development.

Innovation and Research and Development

Financial incentives are available for start-ups in innovation and Research and Development (R&D) efforts. Table 4.1 gives an idea of the specific policies in this regard.

Table 4.1: Financial Incentives For Start-Ups In Innovation and Research and Development

Function	Scheme	Incentives
Start-up & innovation	Sustenance Allowance	Start-ups can avail sustenance allowance of ₹20,000 (S$354) per month for one year. Start-ups with at least 1-woman co-founder will be eligible for a sustenance allowance of ₹25,000 (S$442) per month for one year.
	Seed Support	Start-ups can avail of seed support up to ₹3 million (S$53,129) for product development, marketing and professional assistance. An additional grant of up to ₹1 million(S$17,709) may be availed by start-ups with significant social impact.
	Soft Skill Assistance	Start-ups will be reimbursed up to ₹100,000 (S$1,771) of training expenses in soft skills. A separate fund shall be created under Gujarat Venture Finance Limited (GVFL) for smaller ticket funding of mid-level start-ups, between ₹5 million(S$88,549) to ₹30 million (S$0.5 million).
	Acceleration programmes	Support start-ups up to ₹300,000 (S$5,312) for attending national/international acceleration programmes.
	Promotional Events (focused workshops/ seminars, boot camps/hackathons, grand challenges, etc.)	Support up to 75 per cent of total expenditures (up to ₹500,000 [S$8,855]). Events specific to women entrepreneurship can be supported up to 90 per cent (up to ₹500,000 [S$8,855]).

	Nodal Institutes and Mentoring Assistance	Mentoring assistance of ₹100,000(S$1,771) per start-up will be given to nodal institutes up to a maximum of ₹1.5 million (S$26,565) per annum.
Research and Development	Private Institutions/ Companies	Businesses setting up R&D centres in states would be supported up to 30 per cent of the cost of machinery and equipment.
	Setting up laboratories	Industry associations setting up laboratories would be supported up to 60 per cent of the project cost of machinery and equipment cost.
	Contract/Sponsored research work	Up to 50 per cent of project cost, excluding the cost of land and building from industrial enterprise/industrial association to the All India Council for Technical Education recognised R&D institution / technical colleges)

Thrust Sectors

These are 'core' and 'sunrise' respectively.

The 'thrust' sectors – industries identified for special attention by the state government – have been divided into two groups. These are 'core' and 'sunrise' respectively.

The 'core' sector industries include:

1. Electrical Machinery and Equipment
2. Industrial Machinery and Equipment
3. Auto and Auto Components
4. Ceramics
5. Technical Textiles
6. Agro and Food Processing
7. Pharmaceuticals and Medical Devices
8. Gems and Jewellery
9. Chemicals (in designated area)

The 'sunrise' sector industries include:

1. Industry 4.0 Manufacturing
2. Electric Vehicles and Components
3. Waste Management Projects
4. Green Energy (Solar and Wind Equipment)
5. Eco-friendly compostable material (substitutes to traditional plastics)
6. 100 per cent export-oriented units, irrespective of sector

Investment and Business Facilitation

The Gujarat Single Window Clearance Act of 2017 and the strengthening of the State Investor Facilitation Act (IFA) continue to remain the major channels for business facilitation in the state.

Gujarat is also the first state to de-link incentives from the State Goods and Services Tax (SGST), with capital subsidy linked to the fixed capital investment for setting up manufacturing projects in the state by large investors.

A graded incentive structure for encouraging investments for the thrust sector and other industries (general) has been introduced. The incentives are awarded as a proportion of eligible fixed capital investments, ranging from 12-6 per cent for thrust sectors and 10-4 per cent for general sectors, depending on their locations.[44]

A graded incentive structure for encouraging investments for the thrust sector and other industries (general) has been introduced.

Solar Power Policy 2021

The Solar Power Policy was announced on 19 December 2020 and is planned to be implemented over five years.

The policy encourages residential, small industrial and institutional power producers to set up solar projects. For encouraging small solar projects (up to 4MW), the state government has mandated distribution companies (DISCOMs) to purchase power from these projects at a price higher than the tariff discovered through competitive bidding.[45] While the DISCOMs will purchase solar power from projects above 4 MW capacity through a competitive bidding process. The state will purchase surplus energy after setting off against their consumption.

44 General sector industries are eligible for incentives of 10 per cent, 8 per cent and 6 per cent of FCI in Talukas 1, 2 and 3 respectively; for thrust sectors, the corresponding rates are 12 per cent, 10 per cent and 6 per cent. For more details see 'Gujarat industrial Policy 2020', https://eoibrasilia.gov.in/?pdf11603.

45 DISCOMs will buy at a price that is 20 paise (S$0.0035) / unit higher than the competitive bidding tariff at which the DISCOMs buy from larger projects.

The above policies are expected to contribute significantly to the state's goal of scaling up solar energy capacities in line with national renewable energy targets and reducing dependence on fossil fuels. The Gujarat Energy Development Agency (GEDA) is the dedicated agency set up to promote solar power growth in the state. As the nodal agency, it will oversee registering solar projects and their commissioning.

Electric Vehicle Policy 2021

This is among the latest industrial policies announced by the state government on 1 July 2021 and is to be implemented over four years. The details of the policy are available in Annexure 4c) i).

As mentioned earlier, electric vehicles and their components are one of the sunrise sectors, mentioned among thrust sectors, as identified by the Gujarat Industrial Policy of 2020. All provisions of the latter policy will apply to the Electric Vehicles policy.

The policy proposes setting up 250 charging stations, along with petrol pumps that will host these stations.

A major goal of the policy is to develop the charging infrastructure for electric vehicles in the state. The policy proposes setting up 250 charging stations, along with petrol pumps that will host these stations. The Energy and Petrochemicals Department of the government of Gujarat shall be the nodal agency for setting up charging stations and deciding subsidies in this regard.

Commercial public charging stations for two-wheelers, 3-wheelers and 4-wheelers will be eligible for a 25 per cent capital subsidy on equipment/machinery (limited up to ₹1 million/S$17,710 per station) for the first 250 commercial public EV charging stations. The subsidies would be available for those developers who haven't availed similar subsidies from other national schemes.

The electricity duty of EV charging stations will be fully exempted during the period of this policy.

Tamil Nadu

Industrial Policy 2021

Infrastructure

A significant part of the new industrial policy is devoted to the creation of logistics infrastructure. Specific benefits and incentives have been announced for these investments for building logistics parks, cold chains and warehousing facilities.[46] The benefits outlined in this regard are in Table 4.2.

A significant part of the new industrial policy is devoted to the creation of logistics infrastructure.

Table 4.2: Logistics Policy Incentives

Category	Benefits/Conditions
Industry Status	1. Logistics will be in the 1A category for electricity tariff applicable to Industries. 2. Logistics will be eligible for affordable loans from TIIC with exemption u/s Sec 37-A of the state Land Ceiling Act 3. Single window clearances for building & operations. 4. To permit allotment for industrial warehousing facilities. 5. Logistics & Warehousing to operate 24 X 7 (3 shifts).
The Incentive for Integrated Logistics Parks	Developers of Integrated Logistics Parks[47] will be eligible for Special Incentives, as applicable in Special Incentives for Industrial Parks subject to Approved Industrial Park status with relaxation on the non-processing area (including warehousing) of up to 50 per cent of the park area.
Skill & Capacity Building	TNSDC will ensure the availability of skilled manpower. 50 per cent of the technical training cost to logistics and warehousing projects[48] up to ₹10,000 (S$1771) per employee.
Skill Development Centre	An Apex Skill Development Centre for transport and logistics to be set up.

The focus on infrastructure contains an emphasis on environmental standards and initiatives for sustainable development. The Green

46 Projects entitled for incentives/benefits are those with a) Minimum investment of ₹500 million (S$9 million) and minimum area of 10 acres in Multimodal Logistics Park with Inland Container Depot (ICD) b) Cold chain with minimum investment of ₹150 million (S$3 million) and area of 20,000 sq ft, c) Warehousing facility with minimum investment of ₹250 million (S$4 million) and minimum area of 1 Lakh sq ft.

47 Designated area categories of 'B' and 'C' districts.

48 'C' category districts.

Industry Incentive extends a 25 per cent subsidy on the cost of installed plant and machinery for setting up environmental protection infrastructure subject to a limit of ₹10 million (S$0.2 million) for recycling waste and water for industrial use and sustainable energy usage. The Micro, Small and Medium Enterprises Policy 2021 extends this incentive to all new and existing micro, small and medium enterprises (MSMEs) up to a maximum of ₹1 million (S$17,709).

Rand Development and Innovation

The state government has been promoting R&D through various incentives.

The state government has been promoting R&D through various incentives. An illustration of these is in Table 4.3. To be eligible for the incentives, the enterprises must have a minimum investment of ₹500 million (S$9 million) in eligible fixed assets and should be creating opportunities for 50 employees while being registered with the Department of Scientific and Industrial Research of the government of India.

Table 4.3: Special Incentives for Research and Development Projects

Category	Benefits/Conditions
Capital Subsidy	Reimbursement of 50 per cent of land purchase cost, or lease of land up to 20 acres, @ up to ₹5 million (S$88,550)/acre
R&D Training Incentive	₹10,000(S$177)- per month for 12 months. Employees must be graduates in technology/sciences with 7 years of work experience/ post-graduate in tech/science with 5 years of experience/Ph.D. in sciences/technology.
Enhanced Quality Certification Incentive	50 per cent of the total cost incurred for obtaining a certificate subject to a maximum of ₹10 million (S$17,710) for the period of investment.
Enhanced Intellectual Property Incentive	Reimbursement of 50 per cent of expenditure up to a maximum of ₹10 million (S$17,710) for in-house R&D for a patent/copyrights/ trademark/geographical indicator registration.
Standard Incentives[49]	Electricity Duty or Tax (EB Tax) exemption for 5 years; Stamp duty exemption; Green Industry Incentives for 5 years up to ₹10 million (S$17,710); State Goods and Services (SGST) refund on capital goods

[49] Projects availing the Enhanced Quality Certification Incentive/Enhanced IP Incentive shall not be eligible for Quality Certification/IP Incentive under Standard Incentives.

A series of incentives are available for MSMEs under the state's Micro, Small and Medium Enterprises Policy 2021. The innovation voucher programme (IVP) provides incentives for start-ups, providing 80 per cent of the total budget for approved activities up to a maximum of ₹200,000 (S$3,542). The objective is to promote the development of a new product or production process. Under IVP again, 50 per cent of the total budget is provided for approved activities, up to a maximum of ₹500,000 (S$8,855), for enabling existing/early-stage companies to access potential markets with innovative commercial products. The state venture capital start-up fund enables equity participation of service start-ups through a designated fund management company. There are proposals to create such funds for start-ups contributing to innovation from other countries with a Tamil diaspora.[50]

There are proposals to create such funds for start-ups contributing to innovation from other countries with a Tamil diaspora.

Thrust Sectors

The government of Tamil Nadu supports MSMEs through the comprehensive Micro, Small and Medium Enterprises Policy 2021. This policy provides a special capital subsidy for thrust sector MSMEs that can be located anywhere in the state. The subsidy is up to 25 per cent of plant and machinery value subject to a maximum of ₹15 million (S$0.3 million). The benefits can be availed by both new enterprises as well as existing ones aiming for expansion and diversification.

The following have been identified as thrust sector MSMEs:

1. Electrical and Electronics Industries
2. Leather and Leather Goods
3. Auto Parts and Components
4. Drugs, Pharmaceuticals and Nutraceuticals
5. Solar Energy Equipment
6. Gold / Diamond Jewellery for Exports

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50 This is in line with the Digital Accelerator scheme under 'Yaadhum Oorae' with the American Tamil Entrepreneur Association (ATEA) to promote startups investing in Tamil Nadu from the US in various fields such as IT/Healthcare/EV/emerging areas on IoT, AI, Cloud Computing /SDGs. A grant of 10% of capital raised may be provided towards operational and capital expenditure. Similar funds may be created for startups that contribute to innovation, from other countries with a Tamil diaspora. The sanction of the grants shall be evaluated by a special committee and funded from the state Startup Fund of Funds.

7. Pollution Control Equipment
8. Sports Goods and Accessories
9. Cost-effective Building Materials
10. Readymade Garments
11. Food Processing
12. Plastic (except 'one-time use and throw away plastics')
13. Rubber
14. Alternate Products to 'one-time use and throw away plastics'
15. Electric Vehicle Components, Charging Infrastructure and Components
16. Medical Devices, Equipment and Components
17. Technical Textiles and Medical Textiles
18. Aero Space, Defence Applications and Components
19. Electronic System Design and Manufacturing
20. Biotechnology
21. Petro Chemicals and Speciality Chemicals
22. Industry 4.0
23. Electronic Waste Processing

Investment and Business Facilitation

The Industrial Policy provides targeted incentives to attract large investments.

The Industrial Policy provides targeted incentives to attract large investments. These include investment promotion subsidies, including reimbursement of SGST for 15 years, a flexible capital subsidy of up to 25 per cent for a maximum of 15 years, a fixed capital subsidy of 35 per cent of eligible fixed assets and a two per cent subsidy on turnover for companies having more than 4,000 employees. The scheme includes specific subsidies for the training of transgenders, specially abled and SC/ST workers. An important incentive is towards the cost of land, which includes concessional rates for SIPCOT-eligible projects.[51] Interest subvention is also provided in the form of a five per cent rebate in the rate of interest for ultra-mega projects. All these incentives come in addition to standard incentives for investments that include exemption of EB tax for five years, exemption of stamp duty,[52]

51 10 per cent concessional rate for A and B districts and 50% for C districts for land up to 20 per cent of eligible fixed assets.

52 50 per cent for A and B districts and 100 per cent for C category districts.

25 per cent subsidy on environmental protection infrastructure, 50 per cent subsidy on quality certification and an intellectual property incentive of 50 per cent.

Solar Power Policy 2019

Tamil Nadu has been active in promoting the growth of the vibrant solar power industry in the state for quite some time. The existing policy came into force on 4 February 2019 and will be in place till it is replaced by a new version. The current policy provisions apply to solar energy producers, operators and researchers and are implemented by the Tamil Nadu Energy Development Agency (TNEDA). The TNEDA, along with the Tamil Nadu Electricity Board, is managing various collaborations and partnerships in the solar power sector.

Tamil Nadu has been active in promoting the growth of the vibrant solar power industry in the state for quite some time.

The key features of the policy are as follows:

- Installing solar energy capacity of 9GW by 2023.
- Obtaining 40 per cent of targeted capacity from consumer categories (for example, distributed generation, rooftop solar, small solar). Consumer category solar will have an electricity tax exemption of two years from the date of issue of this order.
- Utility-scale solar energy gross feed-in will be allowed at all voltage levels. For this, wheeling and other charges will be applicable.
- No wheeling will be allowed at a low-tension voltage level. Furthermore, wheeling will be allowed only during generation.
- Excess energy fed into the grid will be treated as (in-firm) power for sale to distribution companies (DISCOMs) at tariffs determined by the Tamil Nadu Electricity Regulatory Commission (TNERC).
- DISCOMs will install bi-directional energy meters to record the import and export of energy for consumers utilising solar generation systems. Producers can choose to get a one-time payment of net energy exported at the end of the 12-month settlement period.

Electric Vehicle Policy 2019

The financial incentives under the policy are applicable for enterprises engaged in manufacturing EVs, EV components and charging infrastructure.

Tamil Nadu had put in place an EV policy from 26 August 2019. The policy will run for 10 years. Implemented by the Industries, Energy and Transport departments of the state, the policy targets EV manufacturers and developers of charging infrastructure in the state. The objectives of the policy are in Annexure 4c. The financial incentives under the policy are applicable for enterprises engaged in manufacturing EVs, EV components and charging infrastructure. The minimum investment required for availing of the incentives is ₹500 million (S$88.5 million) and the creation of at least 50 direct jobs through new projects or expansion of existing projects. Investments made from 1 April 2018, are considered eligible for availing incentives. The incentives are as follows.

- 100 per cent of the SGST paid on the sale of EVs manufactured, sold and registered for use in the state will be reimbursed to the manufacturing companies. The reimbursement will be given for sales made till 31 December 2031.
- For components, such as intermediate products, where the above SGST reimbursement is not applicable, a capital subsidy of 15 per cent will be given on eligible investments made till 31 December 2025 over 10 years. The subsidy will be 20 per cent for EV battery manufacturing units.
- 100 per cent exemption on electricity tax for EV-related and charging infrastructure manufacturing industries till 31 December 2025.
- 100 per cent Stamp Duty exemption for land sale or lease transactions made by EV-related and charging infrastructure manufacturing industries till 31 December 2022.
- 15 per cent or 50 per cent subsidy on the cost of the land (proportion depending on the location of land within the state) obtained from government agencies, for allotments made till 31 December 2022. The proportions are 20 per cent or 50 per cent for EV battery manufacturing units.
- Employment incentive up to ₹48,000 (S$850.08) per employee as reimbursement of employer's contribution to the EPF (Employers Provident Fund) for all new jobs created till 31 December 2025 for EV-related and charging infrastructure manufacturing units.

- Re-skilling allowance to existing automobile manufacturing companies for every current employee in the production line.
- Additional capital subsidy of 20 per cent over the existing subsidy for MSME units engaged in EV component or charging infrastructure manufacturing. Interest subvention of six per cent for MSMEs in EV space on loans taken from Tamil Nadu Industrial Investment Corporation. These incentives will be applicable for units that are set up till 31 December 2025.

These incentives will be applicable for units that are set up till 31 December 2025.

Karnataka

Industrial Policy

Infrastructure

The policy and incentives are being implemented and managed by the Karnataka Industrial Area Development Board (KIADB). A significant part of the incentives is for encouraging the private sector to develop infrastructure in Special Economic Zones (SEZs). These are discussed in Table 4.4.

Table 4.4: Incentives for developing private industrial parks in SEZs

Incentives	Description
Exemption from Stamp Duty & Concessional Registration Charges	Stamp Duty shall be exempted, and concessional registration charges a rate of ₹1 (S$0.017) per ₹1,000 (S$18)[53] will apply for loan agreements and lease deeds, lease cum-sale deeds and absolute sale deeds executed by Developers for lands purchased for the development of private industrial parks.
Subsidy for setting up Common Effluent Treatment Plant (CETP) / Industrial Hazardous waste disposal projects	One-time capital subsidy of up to 50 per cent of the cost of a Common Effluent Treatment Plant (CETP) subject to a ceiling of ₹50 million (S$0.9 million).
Capital Subsidy for Setting up Secondary Treatment Plant (STP)	One-time capital subsidy of up to 50 per cent of the cost of STPs, subject to a ceiling of ₹10 million (S$0.2 million).

[53] Karnataka Govt, announces lower stamp duty for industrial plots, 99 acres, 16 Nov 2020, https://www.99acres.com/articles/karnataka-govt-reduces-registration-fee-for-industrial-plots-nid.html.

Additional Incentives to Micro & Small Units Established within Private Industrial Parks	
Land Subsidy	Special land subsidy in private industrial areas/parks/ estates/flatted factories at the rate of 25 per cent of guidance value limited to the maximum extent of up to one acre in Zones 1 & 2 only.[54]
Water Charges	Subsidy on water charges for tertiary treated water used by units established within the private industrial areas/parks/ estates/flatted factories for the initial five years of operation of the individual enterprise used for establishing tertiary treatment facilities within/outside the private industrial areas/parks/estates/flatted factories and supplied to such enterprises by the developer.
CETP Charges	To enable continuous usage of the CETP, a subsidy on user charges per unit of effluent discharge treated shall be available for the initial five years of operation of the enterprise.
Investment Promotion Subsidy to Private Industrial Parks including International Industrial Park	
Investment Promotion Subsidy	Five per cent of eligible fixed capital investment on building and infrastructure facilities.

Research and Development and Innovation

Under the Innovate Karnataka initiative, the government provides financial support equivalent to ₹3 billion (S$53 million) in the form of grants/equity through its various funds (KA₹EMVEN Fund; KITVEN Fund; Start-up Fund of Funds; IDEA2POC Fund; AVGC Venture Fund Bio Fund) to start-ups; MSMEs in information technology, biotechnology and other manufacturing sectors over four years.

Exclusive R&D centres coming up in SEZs through industry/industry associations supporting MSMEs will be eligible for a 50 per cent capital subsidy on equipment/machinery limited to ₹50 million (S$0.9 million).[55]

54 In such cases land value shall not be considered under the Value of Fixed Assets (VFA) for sanction of any other incentives linked to VFA.

55 Available for first 3 R&D centres in Automotive & Auto Components; Pharmaceuticals; Medical Devices; Engineering & Machine Tools during the policy period.

Thrust Sectors

The following have been identified as 'thrust' sectors, in terms of special policy attention:

- R&D
- Intellectual property rights (IPR)
- Technology adoption and innovation
- Cluster development
- Sustainability
- Responsible industrialisation

Investment & Business Facilitation

A series of administrative reforms have significantly improved the business sentiment in the state. This includes the simplification of the single window clearance mechanism and the regulatory processes and procedures.

Several incentives have been crafted to attract large investments as mentioned in Table 4.5.

Table 4.5: Karnataka – Incentives for Attracting Businesses and Investments

Incentive	Description
Stamp Duty exemption and concessional registration charge	Stamp duty for loan agreements, credit deeds, mortgage and hypothecation deeds executed for availing loans from the state government, including VAT/SGST loan from Department and/or State Financial Corporation, Industrial Investment Development Corporation, national financial institutions, commercial banks, regional rural banks, cooperative banks and other institutions for the initial period of five years only. For lease deeds, lease-cum-sale, sub-lease and absolute sale deeds executed by industrial enterprises in respect of industrial plots, sheds, industrial tenements by KIADB, KSIIDC, KEONICS, Industrial Co-operatives, approved private industrial estates/parks, food parks, SPV formed by the state government, central government and other approved industrial parks shall be exempted by 100 per cent for Zone 1 and 75 per cent for Zone 2.

Stamp Duty exemption and concessional registration charge	The concessional registration charge will be ₹1(S$0.017)/- per ₹1,000(S$18).[56] CETP/industrial hazardous waste disposal projects set up by private investors to support these industries will be eligible for a 100 per cent exemption from stamp duty and concessional registration. Lands transferred by KIADB to KSSIDC for the development of industrial estates will be eligible for similar exemptions and concessions.
Reimbursement of Land Conversion Fee	Zone 1 & Zone 2: 100 per cent
Subsidy for setting up Effluent Treatment Plant (ETP)	One-time capital subsidy up to 50 per cent of the cost subject to a ceiling of ₹25 million (S$0.4 million)
Subsidy for setting up CETP/ Industrial Hazardous waste disposal projects	One-time capital subsidy of up to 50 per cent of the cost subject to a ceiling of ₹50 million (S$0.9 million).
Investment Subsidy for Anchor Industries	Investment Subsidy of ₹100 million (S$18 million) in Zone 1 and ₹70 million (S$1 million) in Zone 2 for encouraging investments in areas where there are no industries with investments, for projects with investments above ₹1 billion(S$18 million) and direct employment of 75 persons.

Investment Promotion Subsidy based on Turnover for Large, Mega, Ultra Mega and Super Mega Enterprises[57]	
Investment range on fixed assets	Reimbursement based on Turnover

Large Enterprises: (that is, enterprises not classified as Medium Enterprises and with fixed asset investments of up to ₹2.5 billion [S$45 million])	To become eligible for the incentives, there must be a minimum direct Employment of 50 persons for the first ₹500 million (S$9 million) & additional employment of 35 persons for every additional investment of ₹500 million (S$9 million). Investment promotion subsidy based on turnover from the date of commencement of commercial production will be up to 45 per cent of the value of fixed assets subject to turnover of 2.25 per cent for Zone 1 and 40 per cent for Zone 2.

56 Stamp duty and concessional registration charges are also applicable to lands purchased under Section 109 of the KLR Act, 1961 and for direct purchase of industrially converted lands for the projects approved by SLSWCC / SHLCC. This incentive will also be applicable for the land transferred by KIADB to the landowner as compensation for the acquired land. Similarly, they will also apply to the registration of final sale deed in respect of lands, sheds, plots, industrial tenements after the expiry of the lease period at the rate as specified in the Industrial Policy which was in vogue at the time of execution of lease-cum-sale deed.

57 Enterprises can avail an investment promotion subsidy as a percentage of the turnover in each financial year for a maximum period from the date of commercial production. Such cumulative investment promotion subsidy availed will be limited to either the period or value of fixed asset (VFA) limits whichever is reached earlier, and no carry forward is permitted. Enterprises requiring lower employment / Enterprises unable to provide employment proportionate to investment as stipulated will have a lower turnover percentage in proportion to the total employment provided. However, the maximum period and VFA limit will be as above.

Mega Enterprises: (that is, investment on fixed assets above ₹2.5 billion [S$45 million] to ₹5 billion [S$91 million])	Minimum direct employment of 200 persons for first ₹2.5 billion (S$44 million) & additional 35 persons for every additional investment of ₹500 million (S$9 million). Investment Promotion subsidy based on turnover from the date of commencement of commercial production will be up to 50 per cent of the value of fixed assets subject to turnover of 2 per cent for Zone 1 and 45 per cent for Zone 2, for eight and seven years respectively.
Ultra-Mega Enterprises: (that is, investment on fixed assets above ₹5 billion [S$91 million] to ₹10 trillion [S$182 million])	Minimum direct employment of 400 persons for the first ₹5 billion (S$89 million) & additional 35 persons for every additional investment of ₹500 million (S$9 million) Investment Promotion Subsidy based on turnover from the date of commencement of commercial production will be up to 55 per cent of the value of fixed assets for turnover of 1.85 per cent for Zone 1 and 50 per cent for Zone 2 for nine and eight years respectively.
Super Mega Enterprises: (that is, investment on fixed assets above ₹10 trillion [S$182 million])	Minimum direct employment of 750 persons for first ₹10 trillion (S$177 billion) & additional 35 persons for every additional investment of ₹1 billion/(S$17 million). Investment Promotion Subsidy based on turnover from the date of commencement of commercial production will be the same as for ultra-mega enterprises.

Renewable Energy Policy

The policy has commenced on 13 October 2021 and will run for five years. The Karnataka Renewable Energy Development Limited (KREDL) is the nodal agency for implementing the policy. The policy will apply to all renewable energy projects sanctioned before the commencement of the policy and to the projects in the process of development.

The policy will apply to all renewable energy projects sanctioned before the commencement of the policy and to the projects in the process of development.

The policy focuses on developing the following in the state: green energy corridors; renewable energy parks; solar energy projects; wind energy projects; solar-wind hybrid energy projects; energy storage projects for renewable energy; biomass projects; co-generation projects; waste to energy projects; mini and small-hydro projects and other new initiatives/pilot projects/R&D.

Other key features of the Policy are:

- Facilitate the development of 20GW of renewable power projects with or without energy storage systems in the state

- Renewable energy project developers can sell energy to ESCOMs/procurers, Intermediaries, or any consumer under open access (captive/group captive and third-party sale) both within Karnataka and outside the state.
- No exemption of charges for open access on sale or purchase of green power.
- Peer-to-peer (P2P) trading of Rooftop Solar PV Energy with P2P energy trading being 'buying &selling of rooftop solar PV energy between two or more grid-connected parties in a secured and reliable way with proper accounting and billing mechanism implemented with the help of Blockchain technology'.

Electric Vehicle and Energy Storage Policy

The Electric Vehicle and Energy Storage Policy commenced on 25 September 2017 and will be effective for five years.

The Electric Vehicle and Energy Storage Policy commenced on 25 September 2017 and will be effective for five years. Being implemented by the state industries department, the policy focuses on supporting the manufacturing of EVs, EV components, battery manufacturing, charging infrastructure and R&D development.

The investment promotion subsidies under the policy apply for micro-enterprises, for subsidies up to 25 per cent of the value of fixed assets and up to a maximum of ₹1.5 million (S$26,564); for small enterprises, up to 20 per cent of the value of fixed assets and up to a maximum of ₹4 million (S$72,637); and for medium enterprises up to ₹5 million (S$88,549). Other incentives include exemptions from stamp duty, concessional registration charges, reimbursement of land conversion fees, exemption from tax on electricity tariff and subsidy for setting up Effluent Treatment Plants.

Maharashtra

Industrial Policy 2019

The core objective of the policy is to augment physical infrastructure and ensure land availability by leveraging special projects (for example,

Maharashtra Samruddhi Mahamarg – Delhi Mumbai Industrial Corridor (DMIC), Shendra Bidkin Industrial area (SBIA), Dighi Port Industrial Area (DPIA), Sagarmala and Coastal Economic Zones (CEZs)) and Critical Industrial Infrastructure Fund).

There is also an emphasis on green industrialisation assistance provided for eligible units for promoting the conservation of water, energy and the environment. Projects covered under the scheme include waste management systems (that is, ETP, STP), pollution control systems/devices, health and safety systems/devices, water conservation/harvesting systems/devices and captive renewable power generation. The benefits will include budgetary support from the Maharashtra Pollution Control Board (MPCB).

There is also an emphasis on green industrialisation assistance provided for eligible units for promoting the conservation of water, energy and the environment.

Research and Development and Innovation

The following initiatives aim to promote R&D:

1. R&D units, including stand-alone facilities of eligible industrial units shall be considered as part of fixed capital investment for availing fiscal incentives.
2. Provision of a special fund for supporting industrial R&D activities.
3. Companies/units/private individuals shall be eligible for fiscal assistance towards obtaining patents related to manufacturing activities.
4. Considering the nature of various new technologies involved, fiscal assistance shall also be given to R&D units carrying out joint ventures.

The state will work on promoting an ecosystem for start-ups, creating a facilitating environment involving young entrepreneurs to enable sharing of their ideas, mentoring them and providing financial assistance.

Thrust Sectors

The Policy identifies the key thrust sectors for priority in land allotment and incentives. These are:

- Electric vehicles (manufacturing, infrastructure and servicing)
- Industry 4.0 (artificial intelligence, 3D printing, internet of things and robotics, nanotechnology, etc.)
- Integrated data centre parks (IDCP)
- Information technology (IT) and IT-enabled services (ITeS)
- Electronic systems design & manufacturing (ESDM), semiconductor fabrication (FAB)
- Agro and food processing
- Nuclear power plant equipment manufacturing
- Green energy/biofuel production
- Aerospace and Defence Manufacturing
- Textile machinery manufacturing
- Logistics and warehousing
- Sports and gym equipment manufacturing
- Mineral/forest-based industries
- Biotechnology and medical and diagnostic devices manufacturing

Considerable policy attention has been devoted to the growth of MSMEs.

Considerable policy attention has been devoted to the growth of MSMEs. The latter include units classified as MSMEs under the MSMED Act, 2006, as well as units with FCI of up to ₹500 million (S$9 million). Incentives for units vary depending on their locations.[58]

Investment and Business Facilitation

Several incentives have been announced to attract large investments. These are in Table 4.6. The incentives work based on minimum thresholds of investments and the minimum employment they generate.

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58 Taluka B, C, D and D+ have incentive ceilings up to 30%, 40%, 50% and 60% of their FCIs, for seven, seven, ten and ten years respectively. For units in Vidarbha, Marathwada, Ratnagiri, Sindhudurg & Dhule, the ceiling goes up to 80% of FCI for 10 years. The ceiling is 100 per cent of FCI and for 10 years for No Industry Districts, Naxalism Affected Areas and Aspirational Districts (Osmanabad, Gadchiroli, Washim and Nandurbar).

Table 4.6: Maharashtra – Incentives for attracting investments

Large Scale Industries		
Taluka/Area Classification	**Minimum FCI, ₹ million (S$)**	**Minimum direct employment (no. of people)**
A & B	7,500 (S$136 million)	1,000
C	5,000 (S$91 million)	750
D	2,500 (S$45 million)	500
D+	1,500 (S$27 million)	400
Vidarbha, Marathwada, Ratnagiri, Sindhudurg & Dhule	1,000 (SS18million)	300
No Industry Districts, Naxalism Affected Areas[59] and Aspirational Districts	1,000 (S$18 million)	250

Mega and Ultra-mega Units			
Type of Unit	**Taluka/Area Classification**	**Minimum FCI, ₹ million (S$)**	**Minimum direct employment (no. of people)**
Mega Industrial Units	A & B	15,000 (S$272 million)	2,000
	C	10,000 (S$181million)	1,500
	D	7,500 (S$136 million)	1,000
	D+	5,000 (S$91 million)	750
	Vidarbha, Marathwada, Ratnagiri, Sindhudurg & Dhule	3,500 (S$64 million)	500
	No Industry Districts, Naxalism Affected Areas and Aspirational Districts	2,000 (S$36 million)	350
Ultra-Mega Industrial Units	Entire State	40,000/ (S$36 billion)	4,000

Source: Compiled from the New Industrial Policy 2019 – for Futuristic Maharashtra report by Industries Department, Government of Maharashtra; https://maitri.mahaonline.gov.in/PDF/Industrial%20Policy%20-%202019.pdf

[59] Naxalism affected areas as per Government Resolution No.: PSI -2013/(CR-54)/IND-8, 1 April 2013, Government of Maharashtra Industries, Energy and Labour Department.

The role of MAITRI will also be extended towards attracting global investments.

MAITRI is an initiative of the state government to facilitate Ease of Doing Business. MAITRI has made a paradigm shift in the role of government from being a regulator to that of a facilitator. MAITRI will be awarded autonomous status for effective implementation of initiatives taken by the government for the promotion of industries, trade & commerce considering the new opportunities in business, trade & commerce. The role of MAITRI will also be extended towards attracting global investments.

Unconventional Energy Generation Policy – 2020

The unconventional energy generation policy of Maharashtra commenced on 31 December 2020. The policy will run for four years – up to 31 March 2025. The Department of Industry, Energy and Labour will be the nodal agency for implementing the policy. The objectives of the policy are in Annexure 4b.

Enhancing the solar power generation capacity of the state is a major objective of the policy. Various categories of solar power projects, developed by various agencies are targeted by the policy in this regard. The most prominent objective in this regard is to develop solar power projects by private developers (10,000MW). The private sector is also envisaged to be actively involved in the development of water grid and rural water supply schemes run on solar power; transmission-connected solar power development projects; energy storage systems for solar power projects; e-vehicle charging stations based on solar energy; and solar/solar-hybrid transmission projects on the sites of mega projects.

Private developers are also being encouraged and incentivised to play major roles in the state's integrated strategy for non-transmission projects for the generation of power from new and renewable sources. The focus of the scheme is the bring in solar-power-run infrastructure in state agricultural programmes. The former includes solar agricultural pumps, rooftop transmission/hybrid solar power plants, solar hot water plants, solar-based plants for cooking,

decentralised micro transmission projects, rural electrification and solar energy-based cold storage.

Electric Vehicle Policy – 2021

The state EV policy commenced on 14 September 2021 and will run for four years till 31 March 2025. The objectives of the policy are in Annexure 4c.

The policy aims to accelerate the adoption of EVs in the state with the goal of contributing to 10 per cent of new vehicle registrations by 2025 and making Maharashtra the country's top producer of EVs in India, in terms of annual production capacity. In the five targeted urban agglomerations in the state (that is, Greater Mumbai, Pune, Nagpur, Nashik and Aurangabad), the policy goal is to achieve 25 per cent electrification of public transport and last-mile delivery of vehicles by 2025. The other ambitious target is to convert 15 per cent of Maharashtra State Road Transport Corporation's (MSRTC) existing bus fleet to electric. Finally, the state is also looking to establish at least one Gigafactory[60] for manufacturing advanced chemistry cell (ACC) batteries in the state.

The other ambitious target is to convert 15 per cent of Maharashtra State Road Transport Corporation's (MSRTC) existing bus fleet to electric.

Charging Infrastructure Incentives

The charging station shall be eligible for the incentives only after the commencement of the operation of the station.[61]

All the benefits under the 'D+' category of mega projects/other categories – as mentioned earlier in the discussion of Industrial Policy - will be provided to these industries irrespective of the location of the manufacturing unit in the state.

60 The Gigafactory phrase was coined in 2013 by Elon Musk, when describing the battery production facility his firm was building in Nevada. That site was really, really big and during its planning Musk said that rising demand for EVs would require more similar-sized 'giga factories' in the future. (source: https://www.tesla.com/en_SG/gigafactory).

61 Public and semi-public charging stations availing FAME II charging infrastructure incentive will not be eligible for these incentives. Also, tariffs applicable for EV charging and battery swapping stations shall be as per order ₹ issued by Maharashtra Electricity Regulatory Commission.

A series of structural policies have been announced to enable the growth of EV investments in the state.

A series of structural policies have been announced to enable the growth of EV investments in the state. These are as follows:

- New residential buildings must have at least 20 per cent of parking spaces as EV ready, of which 30 per cent should be in common parking spaces or spaces unallotted to any individual residence owner.
- Developers of new residential projects would be required to give the option of buying EV-ready parking from 2022 onwards.
- Dedicated off-road public parking spaces shall convert at least 25 per cent of their total capacities to be EV-ready by 2023.
- Institutional and commercial complexes shall convert at least 25 per cent of their total parking spaces to be EV-ready by 2023.
- Government office complexes shall convert their total parking spaces to be EV-ready at the earliest, but no later than 2025.
- All the future public parking spaces, allotted by the bidding process, shall provide free parking to all the EVs.

Uttar Pradesh

Industrial Investment and Employment Promotion Policy of Uttar Pradesh 2017

Infrastructure

The state is providing incentives to the private sector for building industrial parks/ estates of more than 100 acres in Bundelkhand & Poorvanchal; 150 acres in Madhyanchal; and more than 50 acres for Agro parks in Bundelkhand, Poorvanchal and Madhyanchal. The incentives comprise interest subsidy reimbursement as follows:

- 50 per cent of annual interest on a loan for buying land for seven years.
- 60 per cent of annual interest on a loan for building infrastructure for seven years.
- 60 per cent of annual interest on a loan for building housing for workers for seven years.

- 100 per cent and 50 per cent stamp duty exemption to the developer and individual buyers.

The policy supports sustainable development by incentivising the installation of ETPs and rainwater harvesting. Industrial development authorities will strive to install CETPs in industrial estates/parks/areas. The government will also encourage greater compliance of industries with environmental standards and facilitate them in the adoption of technologies that reduce air and water pollution. The policy aims to provide need-based financial assistance for developing Green Industrial Estate and shifting chemical-based units from residential to industrial zones.

The government will also encourage greater compliance of industries with environmental standards and facilitate them in the adoption of technologies that reduce air and water pollution.

Research and Development and Innovation

The start-up policy provides thrust to "START IN UP" for nurturing start-up culture through the INFUSE model (IN for incubators; FU for Fund of Funds; SE for Start-up Entrepreneurs).

Incentives for Incubators:

- Capital Grant: 75 per cent reimbursement of technology infrastructure for government Host Institutes and 50 per cent for other Institutes, subject to a maximum of ₹10 million (S$0.2 million).
- Operational Expenditure: Support of ₹500,000 (S$9,000) per year for 5 years.
- Rebate on Lease/ Rental Space: Reimbursement up to 25 per cent with a maximum limit of ₹1 million (S$17,710) per year, for five years.
- Reimbursement of paid Stamp Duty and Registration Fee: 100 per cent reimbursement on sale/lease/transfer of land and office space for the first transaction.
- Electricity Duty Reimbursement: 100 per cent reimbursement for five years.
- Mentorship Assistance: ₹200,000 (S$3,542) per mentor for Mentorship.
- Incentives for Centres of Excellence: Financial support as Grant-in-aid up to ₹100 million (S$2 million) for five years.

Fund of Funds:

- ₹10 billion (S$177 million) UP Start-up fund for financing start-ups.

Incentives for Start-ups & Entrepreneurs:

- At Idea Stage: Sustenance allowance of ₹15,000 (S$266) per month for a year.
- At the Pilot stage: Marketing/commercialisation assistance of up to ₹1 million (S$17,710) for launching a prototype.
- Patent Filing Cost: Subsidy for obtaining patents subject to a limit of ₹200,000 (S$3,542) per Indian patent awarded and ₹1 million (S$17,710) per foreign awarded patent.

Investment and Business Facilitation

Several fiscal incentives are provided for attracting business and investments. These are in Table 4.7.

Table 4.7: Uttar Pradesh – Incentives for Attracting Investments

Group	Minimum Eligibility		
	Pashimanchal	***Madyanchal***	***Bundelkhand & Poorvanchal***
Mega	Capital investment of more than ₹2 billion (S$35 million) but less than ₹5billion (S$90 million) or Employment to more than 1,000 workers	Capital investment of more than ₹1.5 billion (S$26 million) but less than ₹3 billion (S$53 million) or Employment to more than 750 workers	Capital investment of more than ₹1 billion (S$18 million) but less than ₹2.5 billion (S$44 million) or Employment to more than 500 workers
Mega Plus	Capital investment of more than ₹5 billion (S$90 million) but less than ₹10 billion (S$177 million) or Employment to more than 2,000 workers	Capital investment of more than ₹3 billion (S$53 million) but less than ₹7.5 billion (S$132 million) or Employment to more than 1500 workers	Capital investment of more than ₹2.5 billion (S$44 million) but less than ₹5 billion (S$90 million) or Employment to more than 1,000 workers
Super Mega	Capital investment of more than ₹10 billion (S$177 million) or Employment to more than 4,000 workers	Capital investment of more than ₹7.5 billion (S$132 million) or Employment to more than 3,000 workers	Capital investment of more than ₹5 billion (S$90 million) or Employment to more than 2,000 workers

Several steps have been taken to improve the ease of doing business. These include:

1. Simplification of procedures
2. Time-bound clearances
3. Single Window Clearance
4. Ease for Commercial activities in the state
5. Industrial Security
6. Other regulatory simplification enablers
7. Creating a State Investment Promotion Board (SIPB)

Solar Energy Policy 2017

The Policy came into force in 2017 and will be operational for five years. The objectives of the Policy are in Annexure 4b.

The Policy came into force in 2017 and will be operational for five years.

The Policy encourages the use of solar power energy by implanting over 10,700MW capacity, as fixed by the Union Ministry of New and Renewable Energy (MNRE). The incentives provided by the policy are as follows:

- Intrastate sales to third parties are exempted from wheeling charges/transmission charges.
- Interstate sales are exempted from cross-subsidy surcharges and wheeling charges/transmission charges applicable inside the state.
- Metering for the sale of power is to be done at the STU/Distribution licensee substation.
- State funds are to be used for providing payment security in case any state government, Semi-government, government aided organisations, corporations and statutory bodies implement solar rooftop projects through a third-party (RESCO) model.
- Depending on the response generated, some budgetary support may also be provided by the state government for the installation of rooftop solar power plants in state government, semi-government, government-aided organisations and corporations.
- State government subsidy to the tune of ₹10,000 (S$177)/kw with an upper limit of ₹20,000 (S$355)/consumer on a first come, first

serve basis for grid-connected rooftop net metering arrangement in the private residential sector.
- Electricity duty for 10 years exempted for sale to Distribution licensee, captive consumption and third-party sale for projects set up within the state.
- Incentives declared under the Infrastructure Investment and Industrial Policy of the state shall apply to solar power projects.
- Early disposal of permission under the Land Ceiling Act.
- Exemption from obtaining Environmental Clearance.

Electric Vehicle Manufacturing and Mobility Policy 2019

The state EV policy was announced on 7 August 2019 and will be in force for five years.

The state EV policy was announced on 7 August 2019 and will be in force for five years. The state Ministry of Power is the nodal Ministry for the policy.

A variety of incentives are part of the EV policy. These are as follows.

Manufacturing units (EVMUs and EBUs)

1. Land subsidy: Up to 25 per cent of reimbursement for Mega Anchor Project and Ultra Mega Battery plant on land purchased.[62]

2. The Large, Anchor EVMUs/EBUs and MSME units[63] will be provided incentives including:

   a. Capital interest subsidy
   b. Infrastructure interest subsidy
   c. Industrial quality subsidy
   d. Stamp duty and electricity duty exemption
   e. SGST reimbursement

62 Mega Anchor Project: Investments of over ₹10 billion (S$177 million) with minimum ₹2 billion (S$35 million) investment for EV assemblies. Ultra-Mega Battery Plant: A plant with annual 1GWh output for battery and fuel cell manufacturing.

63 Large EVMUs: Fixed capital investment of at least ₹5 billion (S$177 million) or creating at least 2500 direct employment in state. Large EBUs: Fixed capital investment of more than equal to ₹1 billion (S$18 million) or creating at least 1200 direct employment. Anchor EVMU: Indian Original Equipment Manufacture INR (OEM) designing and manufacturing EVs with investment of at least ₹5 billion (S$177 million) with at least 10 vendor units. Anchor EBU: Indian OEM that designs, manufactures EV batteries with recycling with investment of at least ₹3 billion (S$53 million) with at least 10 vendor units.

3. For manufacturing of alternate clean sources of fuel like hydrogen-based fuel cells will be supported in technology transfer.

    a. Anchor EBUs will be reimbursed 100 per cent and 75 per cent cost of technology transfer towards the first and next five vendor units consecutively, up to ₹5 million (S$88,550).
    b. Ultra-mega Battery plant will be reimbursed 50 per cent cost of technology transfer, up to ₹1 million (S$17,710) per annum.

Development of Charging Infrastructure

1. The state will facilitate the acquisition of land to government developers at concessional rates in designated areas to set up charging infrastructure.

2. DISCOM will plan investment to set up 100 public charging stations in each of the 10 model EM cities.

3. Charging infrastructure to be developed and promoted in public places with provisions to set up charging outlets.

4. Promote EV mobility on prominent highways, with a heavy density of vehicles, fast charging stations and battery swapping infrastructure, at every 50 km.

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Service Units[64]

1. Capital Subsidy @ 25 per cent on fixed capital investment (excluding land cost) to first 100 charging stations subject to a maximum ₹600,000 (S$10,626) per charging station.

64 Service units: a) Slow charging: Minimum capital investment (excluding land cost) of ₹2.5 million (S$44,280) providing charging range of more than 15kms but less than 80kms per hour of charging at 10-50 kW power level. b) Fast category: Minimum capital investment (excluding land cost) of ₹5 million (S$88,559) providing charging range of more than 80 kms per half an hour of charging at 50-150 kW power level. c) Swapping Station: Minimum capital investment (excluding land cost) of ₹2 million (S$35,424) providing integrated services for battery swapping, repair and maintenance at least 5 places in a city.

2. A 50 per cent Capital interest subsidy on fixed capital investment will be provided for setting up hydrogen generation and fuelling plants in the form of reimbursement to the first 10 units in UP, subject to a maximum of ₹5 million (S$88,550) per unit throughout this policy.

Evaluating Policies: Prospects and Challenges

This chapter takes a critical look at the prospects of some of the policies discussed in the earlier chapters. The objective of the chapter is to identify and understand the challenges that the implementation of these policies will encounter. The analysis and insights presented in this chapter are primarily based on interactions with central and state government officials, subject experts, industries and businesses.

Production-linked Incentive

Certain issues with the PLI schemes need to be noted as they progress. Foremost among these is how PLIs for various sectors are managed. Business perceptions argue that heavily bureaucrat-centric and managed incentive systems might not result in the incentives reaching the right beneficiaries.

A further concern with the long-term impact of PLIs is the expectation on the part of businesses that the incentives under the scheme can perpetuate. Once subsidies become a core part of the development trajectories of industries and investments get linked to these, it will be difficult to dispense with subsidies. This might lead to a situation, where not only the existing recipients of the subsidies demand their prolongation, but other sectors, currently outside PLI support, begin demanding the same. The result will be excessive pressure on central government finances.

Once subsidies become a core part of the development trajectories of industries and investments get linked to these, it will be difficult to dispense with subsidies.

While PLIs are intended to augment domestic capacities and position Indian manufacturers for deeper entrenchment in global supply chains, such an objective is unlikely to succeed unless import tariffs are reduced. High import tariffs might result in domestic manufacturing expanding capacities at specific phases of the supply chain in a discrete and inefficient manner.

Gati Shakti Yojana

The GSY is a landmark initiative for enhancing multi-modal connectivity and reducing logistic costs. The objective is to cut the cost of logistics to eight per cent of GDP, from 14 per cent in 2014-15. The significance of the project is evident from the role that the Prime Minister's Office has in monitoring the progress of the initiative.

The GSY has embraced ambitious targets. It envisages Indian Railways establishing around 500 multi-modal cargo terminals in four to five years. Logistics capacity enhancement plans include developing 11 industrial corridors and two new defence corridors in Tamil Nadu and UP. Furthermore, all villages in the country are to be provided with 4G network coverage; the national highways network is to be expanded to 200,000 km; more than 200 airports are to be built; and more than 17,000 km of new gas pipeline network are to be constructed.

This tendency will have to be curbed, and a more collaborative approach should be adopted.

To facilitate the overall growth of logistics and an ambitious project like the GSY, the institutional framework within the government has been recast. The erstwhile Department of Industrial Promotion and Policy (DIPP) within the Ministry of Commerce and Industry has been changed to the DPIIT. The DPIIT is now focusing on logistics. The departmental recast needs to be accompanied by the larger focus of the Department's greater shift to logistics, as opposed to industrial policy promotion and development in the past. As of now, more than a dozen ministries of the central government are involved in the GSY. A network planning group with representatives from all stakeholder ministries is to meet regularly to ensure such coordination. Changes to the National Master Plan can also be done by an empowered group of secretaries headed by the Cabinet Secretary. Ministries and Departments, however, have a tendency of working in silos and not sharing information. This tendency will have to be curbed, and a more collaborative approach should be adopted.

For the plan to truly succeed, the states will have to forge closer partnerships with federal government projects. States are being encouraged to join the platform so that information and data on all

infrastructure and connectivity projects can be shared to enhance synergy. One state from each zone is to be drafted as a partner state in the initiative. They don't necessarily have to be BJP-ruled states. It is not clear, however, how political the choice of states will be. Ideally, a large state like the UP should be involved, along with all the coastal states. However, one of the issues that need to be noted in this regard is that states like Gujarat and Maharashtra have their own logistic policies. These should not come into conflict with the federal plan.

The GSY Digital Platform will allow various government departments to track in real-time and at one centralised place the progress of various projects, especially those with multi-sectoral and multi-regional impact. This will be done through Google Maps and Geographic Information Systems (GIS). The portal will also map and project connectivity traffic by projecting the demand for connectivity, along with an increase in population. Such effective projections require technology and administrative platforms to collaborate and function seamlessly.

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From being initially G2G (centre and states), the GSY portal will subsequently be shared by the government with investors (G2B) and eventually by all – as a platform for live tracking of logistics performance and policies. The transition will proceed seamlessly only if multiple central and state organs connect closely in the beginning; and subsequently, if investors are convinced about the benefits of the information. This would require investors to obtain all information for developing a business plan for a connectivity project in a centralised fashion. From a foreign investor perspective, the progress on GSY should be complemented by engagement with agencies that would be able to inform investors about various details connected to investment, including RFP processes.

The issue of land acquisition for progress on infrastructure needs to be thought through. With the availability of GIS and remote sensing technologies, the project planners under GSY can reclaim degraded lands, rather than acquiring controversial new parcels. In this regard,

mechanisms should be activated for handling litigation, alienation of local communities and the violation of environmental norms.

National Monetisation Pipeline

The NMP estimates an aggregate monetisation potential of ₹6 trillion (S$106 billion) from leasing out core central government assets during FY2022-FY2025. During FY2022, assets of around ₹150 billion (S$3 billion) belonging to the National Highways Authority of India (NHAI) and PowerGrid Corporation of India have been monetised.

The NHAI's asset proceeds were mobilised through the Toll Operate and Transfer (TOT) model for its roads and PowerGrid through the setting up of Infrastructure Investment Trusts (InvIT) for five of its transmission lines. Under both models, stable and operational projects are leased to the private sector, including long-term global strategic and financial investors operating for pension and sovereign funds, insurance companies and asset managers. The assets will be used by these investors for operating, maintenance and toll collection over a period of 15-30 years against an upfront concession fee payment.

The Ministry of Finance has set up an asset monetisation dashboard offering live information from ministries about their asset registers along with their designated nodal officials. However, progress in monetisation for ministries other than road and power has been slow.

A large number of land parcels for monetisation has also been identified by the Rail Land Development Authority.

Railways are lagging in progress on the monetisation of Dedicated Freight Corridors. A large number of land parcels for monetisation has also been identified by the Rail Land Development Authority.[65] The progress, though, has not been satisfactory. In contrast, the civil aviation ministry has proceeded faster on monetising six key airports – Varanasi, Amritsar, Bhubaneswar, Raipur, Indore and Trichy, with seven smaller airports to come up in FY2023.

[65] Apart from 111 land parcels, Railways have identified 84 colonies, four Hill Railways (Darjeeling, Kalka-Shimla, Matheran & Nilgiri), stadiums and multi-functional complexes for monetisation.

Progress is also distinctly slow in monetising assets of central government warehouses, such as those with the Food Corporation of India (FCI) and the central Warehousing Corporation (CWC). The progress looks even more distant in monetising oil pipelines of the Gas Authority of India Limited (GAIL), Indian Oil Corporation (IOC) and the Hindustan Petroleum Corporation Limited (HPCL). Slow progress on monetisation will affect the availability of resources visualised by the central government for financing new infrastructure construction.

Slow progress on monetisation will affect the availability of resources visualised by the central government for financing new infrastructure construction.

Progress on monetisation needs to overcome several operational, procedural and regulatory challenges. These are as follows:

1. Delayed approvals and clearances, policy constraints and lack of coordination among stakeholders. Meticulous planning and coordination are required to address the underlying structural and legacy issues.

2. Proper project structuring and designing of optimal commercial models and risk matrices are crucial for attracting private investors, particularly risk-averse pension funds.

3. With the central government transferring "performing assets" to the private sector, it must ensure user charges do not price out consumers. In the same breath, concerns with respect to valuation models and the lack of identifiable revenue streams in various assets need to be addressed to elicit diverse investor interest.

4. A dispute resolution mechanism should be established for assuring investors.

5. The monetisation process is currently going through a large number of procedural protocols. Road assets monetised through TOT, for example, need to: receive SEBI approval on Draft Placement Memorandum (DPM); in-principle approval for listing on the stock exchange; arranging bank loans; awaiting a decision from High-Level Committee on finalisation of value of assets to be monetised; filing DPM with SEBI; awaiting opening and closing

of market issue; issuing of units and submitting final placement memorandum with SEBI; financial closure document submission and declaring date of closure; disbursement of concession fee and being notified the appointed date of transfer of assets. Such long procedural requirements need to be streamlined for faster progress on monetisation.

National Bank for Financing Infrastructure and Development

The NaBFID has a crucial role to play in augmenting resources for expanding India's infrastructure capacities. There are, however, challenges that it will need to overcome.

Traditionally, development finance institutions (DFIs) in India have been dependent on the central government for capital and resources and have found it difficult to become self-sustainable over time. For the NaBFID, this will be a major challenge, if it is to achieve a loan portfolio of ₹5 trillion (S$89 billion). The institution will need to replenish its capital base from time to time.

Sustaining a stable capital base will require the NaBFID to attract long-tenor funds from a variety of institutions, such as insurance companies and pension funds, whether public, private or multilateral. Such mobilisation will be difficult without assurance of an enabling environment in the country.

Designing an appropriate framework for risk allocation is crucial to attract private participation in DFIs.

As part of efforts to enhance the efficiency of the NaBFID, the government is proposing to encourage private sector DFIs with a view to 'bring pressure on government-owned DFI to perform'. Private players may be reluctant to be involved in DFIs if there are uncertainties regarding government policies and regulations and delays in obtaining approvals for project implementation. Designing an appropriate framework for risk allocation is crucial to attract private participation in DFIs. This would reduce uncertainties associated with

project implementation and policy environment and bring more clarity over business models and future cash flows.

Quality decision-making among public sector financial institutions in India, especially banks, has been affected by fear of investigation by investigative agencies. The government has done well to dispel this fear by ensuring that no investigation can be initiated against employees of the NaBFID without the prior sanction of the central government in the case of the chairperson or other directors and the managing director in case of other employees. Courts will also require prior sanction for taking cognisance of offences in matters involving employees of the NaBFID. These safeguards, however encouraging, need to be implemented in letter and spirit.

These safeguards, however encouraging, need to be implemented in letter and spirit.

To ensure intense and detailed appraisal mechanisms for monitoring the progress of targets, the NaBFID must leverage on digital monitoring, digital performance & management and digital measuring to be more effective. By doing so, the fear of subjectivity coming into the operations of the new DFI can be significantly contained.

Green Hydrogen Policy

The green hydrogen policy has drawn encouraging responses from several energy companies. The long-term challenge in the successful progress of the policy will be in generating sufficient demand for hydrogen as an alternative market to oil, gas and coal.

Hydrogen is the product of several chemical reactions of natural gas and coal. Since the latter also releases carbon dioxide, the resultant hydrogen is termed grey. Green hydrogen is the result of the electrolysis of water, provided the source of electricity is renewable energy. India has also toyed with intermediate blue hydrogen, where natural gas reacts with steam, to capture carbon dioxide and methane. The cost economics have not been found favourable.

Experts suggest that the green hydrogen policy can cut generation costs of hydrogen by up to 50 per cent from the current average of ₹500 (S$9) per kg. But for hydrogen to be competitive as a fuel with alternatives like solar, oil and gas, it must be priced at less than ₹100 (S$2) per kg.

Notwithstanding the enthusiasm that some or most of these big 'user' sectors might display, creating noticeable enthusiasm among users for such a large-scale shift in fuel use is a formidable task.

The next stage in cost reduction will, therefore, depend on the government's efforts to spur industry and transport sectors to adopt hydrogen in a big way. Large-scale adoption will encourage more investments. This will require the Ministry of New and Renewable Energy (MNRE) to prod other ministries – steel, shipping, heavy industries, civil aviation and, most significantly, road transport and highways – to generate demand. Notwithstanding the enthusiasm that some or most of these big 'user' sectors might display, creating noticeable enthusiasm among users for such a large-scale shift in fuel use is a formidable task.

For promoting green hydrogen, the government of India is not relying on creating a 'market-maker', typically a state-run entity to generate demand or meet a supply deficiency in any market.[66] Given that India plans to generate about five million tonnes of green hydrogen by 2030, the scale of the shift being attempted by the government is remarkable, that too without a market-maker.

Instead, the government appears to be relying on different policies to drive demand. Last year, for the first time, the MNRE ticked off states for slipping up on their Renewable Purchase Obligations (RPOs). Every state had committed itself to a declaration of trajectory for RPOs up to the year 2022. These commitments add up to India's declarations on climate change. When states need to stick to their RPOs they prod user industries to buy their fuel obligations from green sources. The hydrogen policy has taken steps in this direction.[67] Some states have

66 In the case of solar and wind energy, this role is being played by the Solar Energy Corporation of India.

67 According to the Green Hydrogen Policy, "the benefit of RPO will be granted (as) incentive to the hydrogen/ammonia manufacturer and the distribution licensee for consumption of renewable power". (Ammonia is a chemical compound of hydrogen with nitrogen. It is far safer and easier to store and transport than hydrogen which vaporises fast from any container making it very hazardous).

begun baulking at these commitments. The resistance reflects the limits by which the central government can push the RPO mechanism.

An alternative to hasten the transition could be the role of energy exchange. The market for green energy at both the Indian Energy Exchange and the smaller PXIL has received regulatory approvals. The current volumes are small, but for companies selling renewable electricity, it is the best route to cut prices further. This is because the state-run electricity distribution companies are unable to offer more long-term power purchase agreements to buy electricity. It is only spot markets where demand can rise for suppliers to be incentivised to bring more RE power to the market. Cheaper RE derived from market mechanics could, thus, lower the cost of producing hydrogen instead of having to depend on government sops.

The current volumes are small, but for companies selling renewable electricity, it is the best route to cut prices further.

Electric Vehicles

India has progressed proactively in the faster adoption of EVs. The central government and the state governments have been working in tandem in this regard. The emphasis of the prevailing policies is on building up the public charging infrastructure to encourage the use of electric vehicles – both by households as well as part of the urban transport system. Production of vehicles, as well as the growth of the infrastructure, is being variously incentivised as seen in the chapters earlier.

A couple of challenges are visualised in the way ahead for the industry. At the state level, the ability to roll out charging infrastructure to cover a wide area or range might turn out to be a difficult goal. The range covered would depend on a variety of factors, including local governance issues.

Within states, a large of commuters depend on intercity travel. Infrastructure corridors within the state, therefore, must be electrified to incentivise people to switch to EVs. Maharashtra, for example, is focusing on setting up charging infrastructure in Mumbai, Pune and

Nasik to aid intercity travel. Similar efforts will need to be taken by other states.

Over time, though, standardisation across batteries should help in achieving uniformity.

The speed of charging will vary across different points as the manufacturers experiment with the performance of the battery. Over time, though, standardisation across batteries should help in achieving uniformity.

Labour Laws

India will be implementing four new labour codes on wages, social security, industrial relations and occupational safety by the next fiscal year beginning in 2022. As discussed in Chapter 2, under these new codes, several aspects related to employment and work culture are expected to change and improve. Employees may be able to enjoy a four-day workweek, as opposed to the current five-day workweek. However, employees will also need to work for 12 hours on those four days since the labour ministry has made it clear that even if the proposal comes through, the 48-hour weekly work requirement must be met.

The labour codes attain added significance in light of the fact that once these are implemented, there would be a reduction in the take-home pay of employees and firms will have to bear a higher provident fund liability.

The central government has already finalised the rules under the four labour codes and now states are required to frame regulations on their part as labour is a concurrent subject – implying joint responsibilities between the centre and states. The Centre is in favour of an approach where the states implement the rules in one go.

Several states – 18 till now – have pre-published draft rules for the four-labour codes.[68] Among the five states covered in this report: occupational safety code rules have been published by Gujarat and Uttar Pradesh; social security code rules by Gujarat, Maharashtra and Uttar Pradesh; and industrial relations and wages code rules by Gujarat, Karnataka, Maharashtra and Uttar Pradesh.

Land

Despite winning some crucial state assembly elections held in February-March 2022, the central government is unlikely to take up amendments to the Land Acquisition, Resettlement and Rehabilitation (LARR) Act, 2013. Land continues to remain an emotive and politically sensitive issue in rural areas, dissuading large-scale changes.

Land continues to remain an emotive and politically sensitive issue in rural areas, dissuading large-scale changes.

The Modi government had sought to alter the LARR Act, 2013, after coming to power in 2014. The LARR Act, 2013 was to act as a baseline legislation for states. The central government headed by Dr Manmohan Singh had passed the Act on the assumption that even if land is a state subject, the acquisition of property, besides rehabilitation and resettlement of people, is a subject in the concurrent list of the Indian Constitution.

The government was not successful in amending the LARR and making the acquisition of land easier for business and industry. With the amendments not moving anywhere, the LARR Act of 2013 has since been interpreted by various high courts in India in different ways, with some upholding the right of states to impose restrictions on the right of landholders to object to acquisition, while some others, like Jharkhand, was accepted.

68 The centre says at least 18 states, UTs have pre-published draft rules for four labour codes, Financial Express, 21 March 2022, https://www.financialexpress.com/industry/centre-says-at-least-18-states-uts-have-pre-published-draft-rules-for-four-labour-codes/2466978/.

Karnataka moved to notify the LARR Act in 2017 but has not rescinded the state Land Reforms Act of 1961. Last year, it allowed non-agriculturalists to purchase agricultural land, while doing away with income limits prescribed for such purchases and increased the ceiling on the amount of land that can be owned by a single individual or family. Tamil Nadu, too, has included under LARR the Tamil Nadu Acquisition of Land for Industrial Purposes Act, 1997. This means the state is not bound to go only by the central legislation of the LARR Act 2013. Maharashtra has also followed the Tamil Nadu model.

The understanding has significance for all industrial policies and projects predicated on large land acquisitions.

Ahead of the 2024 general elections and even subsequently, major changes in farm laws by the central government are unlikely. Investors will have to engage with the respective state governments and obtain land parcels on terms to be settled bilaterally. The understanding has significance for all industrial policies and projects predicated on large land acquisitions.

Agriculture

The central government withdrew the three farm laws it had introduced in August 2020, towards the end of 2021. The withdrawal was predicated on the assumption that there is a political dividend in not changing the land relation equations in the rural areas. The renewed support by the voters to the ruling BJP party, especially in Uttar Pradesh and Uttarakhand, in the recently concluded state elections, clearly underscores this.

A panel of experts[69] constituted by the Supreme Court of India in January 2020 for studying the three farm acts had claimed that 86 per cent of organisations, representing more than 30 million farmers, supported the three farm laws. Yet, the central government had to repeal the laws after months of long protests on the borders of Delhi.

[69] The four members of the panel included noted agriculture economist Ashok Gulati, Shetkari Sanghatana (Maharashtra) President Anil Ghanwat, International Food Policy Research Institute's Pramod Kumar Joshi and Bhupinder Singh Mann, president of a faction of the Bhartiya Kisan Union. Mann later recused himself from the panel.

The panel's report mentioned that some alternative mechanisms for dispute settlement – through civil courts or arbitration mechanisms such as farmer courts – may be provided to the stakeholders. It further recommended a mechanism to strengthen agricultural infrastructure through cooperatives and Farmer Producer Organisations (FPOs), while an agriculture marketing council with all states and UTs as members may be formed for implementation of the Acts (now repealed).

Taking a cue from the way matters have moved on land, it is quite certain that states will adopt similar divergent tactics in bringing in farm reforms. They shall possibly follow the Model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act of 2017 that was passed by Parliament to reform the farm sector, but serendipitously.

Reflections on States

Uttar Pradesh

The state government will be attentive to serving the interests of farmers to ensure that a positive turnaround in the rural economy gains further traction and political goodwill. The BJP had promised to provide free power to farmers for irrigation and expand the minimum support price basket for major vegetable crops (for example, potato, tomato, onion). Additionally, an investment of ₹250 billion (S$4 billion) in setting up a robust network of cold chains and warehouses for grading of horticultural crops is planned. Extensive modernisation of more than 100 state sugar mills is planned along with settling of payment arrears for cane growers. The sugarcane belt in Western UP is politically more sensitive and assertive, compared to other state regions. The state government will be focused on addressing the interests of cane growers in view of the prospect of Parliamentary elections in two years' time. The state is also expected to leverage the ethanol blending segment to provide an additional revenue stream to small and marginal farmers, as well as curb environmental pollution.

The BJP had promised to provide free power to farmers for irrigation and expand the minimum support price basket for major vegetable crops (for example, potato, tomato, onion).

In infrastructure, the projects launched, such as the Purvanchal Expressway will be expedited. The Bundelkhand Expressway and Gorakhpur Link Expressway are nearing completion. The Bundelkhand Expressway is expected to be completed by mid-2022, while the Gorakhpur Link Expressway will be ready in 2023.

The state has plans to build a new international airport at Ayodhya.

With elections over and the COVID-19 pandemic having stabilised, the thrust on tourism is expected to be robust. The focus will be on promoting tourism in Ayodhya, Agra, Mathura, Varanasi and the Buddhist Circuit. The state has plans to build a new international airport at Ayodhya.

The UP government is planning to work actively with the private sector. The Department of Planning of the state administration has issued a tender inviting consultants\companies to engage with it for 5 years. The tasks are to:

a. Prepare a road map for the state to achieve a state GDP of US$1 trillion (S$1.3 trillion) by FY2027.
b. Advise departments on details of the plan and ensure their implementation.
c. Work with a high-powered committee of the state government to assess the need for more prudence in state government expenditure, revenue and capital receipts from within the state and optimum utilisation of infrastructure.

From the terms of the tender, this appears to be the first occasion in India where a state government will allow a private sector agency to work inside the highest level of the government.

Maharashtra

Sanctions for large-scale projects in Maharashtra are likely to slow as a result of tensions within the ruling MVA alliance. This is because the Congress, as an alliance partner, has become considerably weaker after the latest round of assembly elections in India held during February-March 2022. The other members of the alliance, NCP and

the Shiv Sena will now be wary of taking on the resurgent BJP, which is the largest party in the state assembly and sits in the opposition. Matters have been further complicated, as in the neighbouring state of Goa too, the BJP has formed a government again with more seats than the last time.

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Because of these issues, the Maharashtra state administration will be most cautious in taking up new projects. At stake could be plans to develop key refineries, roadways and other large infrastructure sector projects, where there can be expected political fallouts over land acquisitions, environmental challenges and others.

Gujarat

The state will be holding assembly elections later this year.

The ruling BJP is confident of doing well in the elections. The main reason behind the confidence is the lack of effective opposition from the Congress party, which hardly has recognisable state leaders. The opposition votes could instead get polarised with the Aam Aadmi Party (AAP), which has been trying to build up a base in the state for a long time. The AAP has recently emerged victorious in the Punjab assembly elections and is trying to position itself as the prime opposition party at the national level.

Investments in the state will be cleared at a rapid clip. Even though investors can be cautious about which party comes to power, Gujarat has always enjoyed a pro-business environment. Irrespective of whoever comes, this will continue. Also, while the BJP has favoured large-scale investments, AAP has developed a similar economic policy. This should bode well for the investment outlook in the state.

There are no specific updates on Karnataka and Tamil Nadu now.

The Overall Outlook and Long-term Investor's Perspective

The Indian economy experienced considerable turbulence over the last couple of years. The COVID-19 pandemic dealt a hard blow to an economy that was already experiencing a decelerating trend rate of economic growth. From FY2018 (2017-18), the annual growth rate of GDP in constant prices dropped below 7 per cent. A decelerating trend saw the growth rate decline further to 4.2 per cent in FY2020 (2019-20). The impact of COVID-19, which began being felt from April 2020 onward as India imposed a stringent lockdown for containing the pandemic, was perpetuated throughout much of FY2021 (2020-21). The inevitable impact of the pandemic and its containment efforts – similar to experiences from large parts of the Asia-Pacific and much of the rest of the world – was a contraction in GDP growth. For the first time since the introduction of economic liberalisation policies in 1991, *the economy experienced a negative rate of growth in GDP*.[70]

This was largely because, in spite of the severity of the pandemic, several economic and business operations continued, as the government refrained from imposing a harsh lockdown.

Since then, however, there has been a strong recovery in the economy. This has happened, notwithstanding, the disastrous impact of the second wave of the COVID-19 pandemic in India during April-May 2021. The country suffered an unprecedented loss of lives, with the healthcare system brought to breaking point by the raging pandemic. However, the economic loss from the catastrophe was less than that during the first round of the pandemic in the previous year. This was largely because, in spite of the severity of the pandemic, several economic and business operations continued, as the government refrained from imposing a harsh lockdown. Lessons learnt from the first wave of the pandemic were put to good use on the second occasion through the implementation of effective protocols. The central and state governments, while staying vigilant as the pandemic waned, were quick to allow businesses the opportunity to revive

[70] Handbook of Statistics on the Indian Economy, Reserve Bank of India; Table 219; https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/219T219AFF67200F48ED9B6297B5BE458A0D.PDF

and recover. This led to several employment-intensive sectors, such as tourism, hospitality, construction and civil aviation, to pick up the momentum fast. By the end of 2021, the domestic economy had recovered sufficiently to encourage hopes of an overall buoyant economic turnaround manifesting in strong GDP growth. This resulted in the economy growing by 9.1 per cent in FY2021. The growth was notwithstanding uncertainties clouding the global outlook over the Russia-Ukraine conflict and its concomitant impacts on regional and global economic prospects, most importantly, global energy prices.

By registering a strong rebound from the contraction in FY2022, the Indian economy displayed characteristic resilience. Indeed, neither the second wave of COVID-19 in April-May 2021, nor the Omicron-induced third wave during December 2021-January 2022, were able to significantly halt the economic momentum. The third wave was noticeable for the economy being able to maintain economic and industrial functions without any visible adverse impact. Greater knowledge about the character of the pandemic, more preparedness of national and state healthcare systems and rapid progress in vaccination were the major reasons behind the economy not experiencing any major disruptions. *India's progress in vaccination was remarkable, enabling it to drastically lower hospitalisations and casualties.* Fifty-nine per cent of the Indian population was fully vaccinated in early 2022 with more than 71 per cent administered at least one dose.[71]

India's merchandise exports crossed a new milestone of US$400 billion (S$549 billion) in FY2022 and increased by 45 per cent over the previous year.[72] A variety of exports, including petroleum products, engineering goods, electronics, organic and inorganic chemicals, gems and jewellery, leather, marine products and cereals have demonstrated strong growth during FY2022. India's exports are expected to increase further in the foreseeable future as India

India's exports are expected to increase further in the foreseeable future as India enters into several significant FTAs.

71 'India's vaccination statistics', 26 March 2022, https://ourworldindata.org/covid-vaccinations?country=IND

72 Handbook of Statistics, Reserve Bank of India, Table 117, https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/117T_150920236C7A8794F6294DA2B0B5E29ED81DA1ED.PDF

enters into several significant FTAs. After concluding an FTA with the United Arab Emirates (UAE) in early 2022, *India has concluded an interim Comprehensive Economic Cooperation Agreement (CECA) with Australia and is close to concluding an FTA with the United Kingdom (UK)*. It is in the advanced stages of FTA negotiations with the EU and Canada and is engaged in FTA talks with Israel and the Gulf Cooperation Council member countries.[73]

The Indian economy continues to enjoy the confidence of long-term FDI investors. During FY2022, gross FDI inflows to India were estimated at US$84.8 billion (S$111.6 billion), marking an increase of over US$82 billion from the previous year (S$108 billion).[74] *The FDI flows remained healthy* despite global FDI flows continuing to be affected by adversities created by the COVID-19 pandemic and a variety of challenging geopolitical conditions in Asia.

These policies will complement and consolidate the opportunities being created by innovative entrepreneurs in India.

In several ways, COVID-19 presented India with a unique context of new opportunities. The government – both central and state(s) – responded to the understanding by announcing a large range of enabling policies, focusing on the creation of greater capacities in domestic manufacturing, improving logistics and achieving sustainable development goals – as discussed in the previous chapters. These policies will complement and consolidate the opportunities being created by innovative entrepreneurs in India.

Since the onset of COVID-19, there has been a steady growth of start-ups in India, taking advantage of the systemic and functional transitions to digital modes. *India currently has the third largest start-up ecosystem in the world.* More than 66,000 start-ups – as recognised by the DPIIT – are functioning in India. Table 6.1 shows the start-ups for the five states covered by this report.

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73 The Gulf Cooperation Council includes Bahrain, Kuwait, Qatar, Oman, Saudi Arabia and United Arab Emirates.

74 Handbook of Statistics, Reserve Bank of India, Table 149. https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/149T_150920231AB639300C2C4538834E7A2F28C9ED38.PDF

Table 6.1: Start-Ups and Incubators

State	Start-ups (no.)	Incubators (no.)
Gujarat	13151	65
Karnataka	19667	112
Maharashtra	34341	100
Tamil Nadu	11993	109
Uttar Pradesh	19717	82

Source: http://startupindia.gov.in

The huge growth in start-ups has remained unabated during the pandemic and has, in fact, accelerated during its duration. During January 2022, Indian start-ups mobilised US$3.5 billion (S$5 billion) through 130 deals, which was a rapid rise over the mobilisation of US$0.6 billion (S$0.8 billion) in January 2021 through 75 deals and US$1.02 billion (S$1.4 billion) through 65 deals in January 2020.[75]

The remarkable economic dividends arising from the flourishing of start-ups in India are visible from the rapid increase in unicorns. Unicorns – start-ups worth more than US$1 billion (S$1.3 billion) – have experienced exponential growth in India. Beginning from FY18 (2017-18), the number of unicorns from India has been growing at an annual rate of more than 60 per cent. India currently has 94 unicorns with an aggregate valuation of around US$320 billion (S$440 billion).[76] More than 40 unicorns were produced during 2021 aided by a variety of post-COVID transformational factors. These include the growth of digital businesses due to work-from-home practices; large growth in digital payment systems and number of smartphone users; and extensive digitisation of commerce. Indian unicorns are dominating fintech, ecommerce and SaaS (software-as-service) spaces. The existing start-ups and the upcoming ones would be expanding into more innovative areas such as edtech, space and several other AI-based applications in the foreseeable future.

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75 Economic Survey 2022: At least 14,000 new startups recognised in India, up 20 times in five years, The Economic Times, 31 January 2022, https://economictimes.indiatimes.com/tech/startups/economic-survey-2022-at-least-14000-new-startups-recognised-in-india/articleshow/89243366.cms

76 The Indian Unicorn Landscape, Invest India, https://www.investindia.gov.in/indian-unicorn-landscape.

This is an area where India will need to devote considerable policy attention and focus and work with foreign countries and investors to ramp up local tech resources.

While the growth of unicorns and tech start-ups speak volumes about India's innovative capacities, entrepreneurship and an enabling policy framework that are strong attractions for investors, they also point to a fast-growing supply constraint in the Indian economy. *Demand for high-end tech skills is increasing at a very fast pace in India* as tech start-ups expand and cater to both domestic and external demand. The lack of adequate local high-end tech skills has put the latter skills at a high premium in the country. Compensations for well-qualified tech workers have risen rapidly, creating hiring issues for many start-ups. This is an area where India will need to devote considerable policy attention and focus and work with foreign countries and investors to ramp up local tech resources.

Long-term investment prospects in India have become significantly appealing due to the progressive tax reforms introduced by India. The most significant of these are the amendments to retrospective taxation demand notices. These were made on supposed indirect transfer of Indian assets pursuant to any mergers and amalgamations entered before 28 May 2012. Prospective investors in India no longer have to worry about retrospective taxation issues. The amendment consolidates India's identity as an economy with competitive tax rates, with corporate income tax rates currently at 22 per cent for existing businesses and 15 per cent for new manufacturing enterprises. India's endorsement of the global minimum corporate tax rate of 15 per cent at the G20 and its enthusiastic commitment to the OECD's inclusive framework on base erosion and profit shifting (BEPS) bring Indian tax laws conclusively within an international framework.

Challenges on reforms, however, remain in areas of land, labour, agriculture, lower judiciary and education. Widespread political support for investment-inducing enabling policy reforms in these areas is difficult to obtain. These sectors offer livelihoods to large numbers – both directly and indirectly – and are inherently politically sensitive. The vested interests, particularly those of entrenched lobbies – unions, trader communities, bureaucracies and local politics – are often too large and powerful to be demolished for implementing reforms. The way forward in these areas is to be worked out by

individual state governments. *States are much better placed to take forward these reforms given their deeper understanding of local positions and interests.* This is evident from efforts made by states such as Maharashtra and UP in implementing changes in the Factories Act of 1948 that enable women employees to work night shifts; and digitisation of land records by Karnataka, Tamil Nadu and Gujarat.

Challenges are also going to manifest in the crucial reforms aiming to *privatise government enterprises*. Nowhere will this be more evident than in the banking sector. The government had announced the privatisation of two state-owned banks in the Budget for FY2022 as part of its disinvestment target. The move is being facilitated through the Banking Laws (Amendment) Bill of 2021.[77] The Bill proposes that the government retain a 26 per cent stake in the privatised banks. The NITI Aayog has recommended four mid-sized public sector banks – Bank of Maharashtra, Bank of India, Indian Overseas Bank and the central Bank of India, though the Bill does not mention any of these banks and hasn't been introduced in Parliament as yet. However, bank unions have responded to the announcement by staging protests, the latest being a two-day strike on 28 and 29 March 2022. Some quarters feel that repeal of the agricultural reform laws will hamper progress on bank privatisation as well. However, it might not be so, and the government appears to be keen to engage in wider consultations before announcing specific steps for privatisation.

Some quarters feel that repeal of the agricultural reform laws will hamper progress on bank privatisation as well.

Banking reforms are being eagerly watched by foreign investors. India's keenness to engage the latter in this regard is evident from the RBI allowing the merger of the Lakshmi Vilas Bank (LVB) with the DBS Bank in November 2020. This was the first occasion when Indian authorities turned to a foreign bank to bail out a failing local bank.[78] Foreign banks and financial institutions will also be on the radar as the government moves ahead with the divestment of its ownership in

[77] The bill intends to effect amendments in the Banking Companies (Acquisition and Transfer of Undertakings) Acts, 1970 and 1980 and incidental amendments to Banking Regulation Act, 1949 in the context of the Union Budget announcement.

[78] In March 2019, DBS converted its India operations from a branch to a wholly owned subsidiary. It had 34 branches in 24 Indian cities. The merger with LVB added another 563 branches to its network.

the IDBI Bank. However, the risk-taking appetite of foreign investors in state-owned banking assets will enlarge only if the government is able to provide clear signals on proceeding smoothly on the privatisation path.

A Sector-Specific Perspective (with Particular Focus on Singapore Investments)

India's enabling foreign investment policies make it one of the easiest emerging markets in the world to invest in, through the automatic approval route of the Reserve Bank of India (RBI). Almost all long-term investments in India – across sectors and the size of the investments – are possible through the automatic route. Investment proposals that require to be processed outside the automatic route are also being quickly expedited. 'Invest India' – the national investment promotion and facilitation agency – is playing a leading and active role in addressing investor queries and concerns.

Supported by enabling reforms aiming to improve efficiencies within the economy and a variety of financial incentives offered by the central and state governments, the policies will make Indian producers more competitive for integrating into global supply chains.

As discussed in the earlier chapters, the context of COVID-19 allowed the central government in India to announce a flurry of transformative policies. These policies have the potential to radically alter the character of the Indian economy. They can make India a global manufacturing hub by augmenting domestic production capacities of a large number of items – including raw materials, intermediates and components – that India currently imports extensively. Supported by enabling reforms aiming to improve efficiencies within the economy and a variety of financial incentives offered by the central and state governments, the policies will make Indian producers more competitive for integrating into global supply chains. India should, over time, find itself hosting longer ends of various supply chains that enable it to develop as a competitive global exporter to various third-country markets. At the same time, the policies that have been announced and discussed at length in this report, are intended to make India adopt practices and systems that enable its citizens to imbibe sustainable living standards. The thrust towards greater production and consumption of non-renewable sources of energy

and emphasis on the use of non-fossil powered vehicles as a means of transportation, are clear indications in this regard.

The goals of the policies cannot be achieved unless investments materialise. Needless to say, foreign investments are going to be critical in making India realise its ambitions.

From a Singapore perspective, the current policy context offers the opportunity to play a meaningful role in India's future growth story. The opportunity will be mutually beneficial with Singapore investments in India well-positioned to reap long-term high and stable rates of return, assured by a deep and expanding domestic market and a burgeoning middle-income class. Indeed, the opportunities to earn high returns from long-term investments in India are not limited to established enterprises with deep pockets. *India's thriving start-up eco-system, fertile entrepreneurial initiatives and an abundance of innovative talent eager to collaborate and explore prospects globally and regionally, make innovative and tech-focused Singapore MSMEs ideal partners for existing and upcoming start-ups in India.*

The opportunity will be mutually beneficial with Singapore investments in India well-positioned to reap long-term high and stable rates of return, assured by a deep and expanding domestic market and a burgeoning middle-income class.

Future investments from Singapore into India – in line with the policies and their stated priorities discussed in this report – can move into a variety of sectors. A large number of *PLI-supported industries – semiconductors, solar panels, pharmaceuticals and electronics*, in particular – are areas where Singapore investors can look forward to investing in creating capacities that will cater to the large domestic market as well as exports. One of the best examples of the PLI schemes achieving these objectives is visible from the experience of Apple, which is now able to achieve substantial parts of its domestic production and export targets for smartphones, from its India-based contract manufacturers - Wistron in Karnataka and Foxconn Hun Hai in Tamil Nadu – both of whom have been chosen for PLI support.[79] More such PLI beneficiaries with notable performances will soon be coming up in other sectors. As of now, offers are closed under PLIs, but

[79] 'Apple's Big Bite: Exports from India at Rs10,000 crore', Financial Express, 21 March 2022, https://www.financialexpress.com/industry/apples-big-bite-exports-from-india-at-rs-10000-crore/2466111/.

are likely to recommence in future. Connecting to Indian businesses chosen under various PLIs is a good strategy for identifying future business opportunities.

India's industrial development policies are focusing strongly on sustainable development. Two major components of the emphasis are the generation of non-fossil fuel sources of energy production and the inducting of electric vehicles in public and private transportation. State policy initiatives by Karnataka, Tamil Nadu, Uttar Pradesh, Gujarat and Maharashtra have been reported at length in Chapter 4. Singapore investors might be specifically keen to get engaged with India in its efforts to develop *green hydrogen/green ammonia*. With the exception of Uttar Pradesh, the remaining states are coastal states, making them capable of becoming important entities in the growth of *green supply chains*, in collaboration with Singapore. At the same time, the adoption of electric vehicles in India is proceeding through a strong focus on the expansion of public infrastructure enabling the use of electric vehicles, mainly through greater facilities for charging and swapping of batteries. Singapore is currently engaged in similar domestic initiatives. Both green hydrogen and *electric vehicles* are areas where Singapore businesses and agencies can purposefully explore collaborations with Indian companies and entrepreneurs.

As in the past, Singapore also remains a major source of expertise for contributing to a greater supply of high-end technical skills in India.

There are multiple opportunities that Singapore businesses of various competence and size can look at across the wide spectrum of policies announced in India and discussed in this report. These range from asset operation and revenue-earning opportunities arising from the NMP; picking up infrastructure and logistics investment opportunities from the real-time progress on projects revealed by the upcoming *GSY*; and the developments taking place in the *GIFT City in Ahmedabad*, in terms of the interests of the central government of India in developing cutting-edge capacities in world-class universities, arbitration and climate finance. As in the past, Singapore also remains a major source of expertise for contributing to a *greater supply of high-end technical skills* in India.

As this report has discussed and analysed, conditions in India are evolving and challenges continue to remain in choosing sectors for investments. However, two factors need to be noted in this regard. First, *the scale and brisk pace of ambitious and transformative policies announced*, since the outbreak of COVID-19 – by the central government and states – have been unprecedented. This clearly implies India's intention of giving a hard and lasting push to its economy, in terms of producing internal capacities and capturing greater shares of global markets. The results have begun showing in the turnaround that the economy has displayed and the steady rise in exports and investment. As more of the ambitious policies begin getting implemented and traditional weaknesses of the economy, in terms of high costs of doing business are addressed, the prospects of a good return on investment from the economy would become stronger. From a foreign investors' perspective, this is a scenario that needs to be looked at closely. Second, in several areas of their current industrial and technological strategies, Singapore and India are in convergence, particularly in areas of sustainable development. It would make imminent long-term sense for businesses in both areas to connect closer in this regard.

From a foreign investors' perspective, this is a scenario that needs to be looked at closely.

Annexures

Details of Conditions for Investment

Annexure 2.1: Production Linked Incentive Schemes

#	Name of the Scheme	Financial Outlay (in INR crores)	Financial Outlay (in SGD)	Total tenure	Targeted Segments	Associated Department, Institution/ Ministry	Source (read for details)
1	Production Linked Incentive (PLI) Scheme for promotion of domestic manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates (DIs) and Active Pharmaceutical Ingredients (APIs) In India	6,940	1.26 bn	6 years until FY30	1. Fermentation based KSMs/Drug Intermediates 2. Fermentation based niche KSMs/Drug Intermediates/APIs 3. Key Chemical Synthesis based KSMs/Drug Intermediates 4. Other Chemical Synthesis based KSMs/Drug Intermediates/APIs	Department of Pharmaceutical, Ministry of Chemicals and Fertilizers	https://pharmaceuticals.gov.in/sites/default/files/Gazettee%20notification%20of%20bulk%20drug%20schemes_0_0.pdf
2	Production Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing	40,951	7.4 bn	5 years until FY24	Mobile phones and specified electronic components	International Co-operation and Industrial Promotion Group (IPHW Division), Ministry of Electronics and Information Technology	https://www.meity.gov.in/writereaddata/files/production_linked_incentive_scheme.pdf
3	Production Linked Incentive Scheme for Promoting Domestic Manufacturing of Medical Devices.	3,420	622 mn	5 years until FY27	Medical Devices	Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers	https://pharmaceuticals.gov.in/sites/default/files/Gazette%20notification%20of%20Medical%20Device%20schemes_1.pdf

4	Production Linked Incentive Scheme (PLI) for Pharmaceuticals	15,000	2.7 bnn	6 years until FY29	The manufacturers of pharmaceutical goods registered in India will be grouped based on their Global Manufacturing Revenue (GMR) to ensure wider applicability of the scheme across the pharmaceutical industry and at the same time meet the objectives of the scheme. Group A: Applicants having Global Manufacturing Revenue (FY 2019-20) of pharmaceutical goods more than or equal to Rs 5,000 crore [11,000 CR] Group B: Applicants having Global Manufacturing Revenue (FY 2019-20) of pharmaceutical goods between Rs 500 (inclusive) crore and Rs 5,000 crore [2250 CR] Group C: Applicants having Global Manufacturing Revenue (FY 2019-20) of pharmaceutical goods less than Rs 500 crore. [1750 CR]	Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers	https://pharmaceuticals.gov.in/sites/default/files/Gazette%20Notification%20of%20PLI%20scheme%20for%20Pharmaceuticals_0_0.pdf
5	Production Linked Incentive Scheme to Promote Telecom and Networking Products Manufacturing in India	12,195	2.2 bn	4 years until FY25	Companies/ entities engaged in manufacturing of specified telecom and networking products in India	Department of Telecommunications, Ministry of Communications	https://www.pli-telecom.udyamimitra.in/Default/ViewFile/?id=Telecom_Gazette.pdf&path=MiscFiles

6	Production Linked Incentives Scheme for Food Processing Industry	10,900	1.9 bn	6 years until FY27	1. Ready to Eat/ Ready to Cook (RTE/ RTC) 2. Fruits and Vegetable Products 3. Marine Products 4. Mozzarella Cheese	Ministry of Food Processing Industries	https://mofpi.nic.in/PLISFPI/central-sector-scheme-production-linked-incentive-scheme-food-processing-industry-plisfpi
7	Production Linked Incentive Scheme (PLI) for White Goods (Air Conditioners and LED lights) Manufacturers in India	6,238	1.1 bn	5 years until FY29	Companies/ entities engaged in manufacturing of components of Air Conditioners and LED Lights in India	Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry	https://dipp.gov.in/sites/default/files/PLIWG-Notification-16042021_10May2021.pdf
8	Production Linked Incentive Scheme 'National Programme on High Efficiency Solar PV Modules	4,500	818 mn	5 years until FY26	-	Renewable Energy Development Agency (IREDA), Ministry of New & Renewable Energy	https://mnre.gov.in/img/documents/uploads/file_f-1619672166750.pdf
9	Production Linked Incentive (PLI) scheme for implementation of giga-scale ACC manufacturing facilities in India (National Programme on Advanced Chemistry Cell (ACC) Battery Storage)	18,100	3.3 bn	5 years	ACC and Integrated Advanced Batteries	Department of Heavy Industry, Ministry of Heavy Industries and Public Enterprises	https://heavyindustries.gov.in/sites/default/files/2023-09/ACC%20Scheme%20Notification%209June21.pdf
10	Production Linked Incentive Scheme for Specialty Steel in India	6,322	1.1 bn	5 years until FY30	Coated/Plated Steel Products High Strength/Wear Resistant Steel Specialty Rails Alloy Steel Products and Steel Wires Electrical Steel	Ministry of Steel	https://steel.gov.in/sites/default/files/PLI%20scheme%20for%20Specialty%20steel-gazette%20notification.pdf
11	Production Linked Incentive Scheme for Textile Products: MMF segment and technical textiles	10,683	1.8 bn	-	MMF (Man-made Fiber) Fabric, Garments and Technical Textiles	Ministry of Textiles	https://pib.gov.in/PressReleasePage.aspx?PRID=1753118

12	Production Linked Incentive Scheme for Automobiles & Auto Components	57,042	10.95 bn	-	-	Department of Heavy Industry, Ministry of Heavy Industries and Public Enterprises	https://www.grantthornton.in/insights/articles/pli-scheme-for-the-automotive-sector-towards-an-atmanirbhar-bharat/
13	Production Linked Incentive Scheme for drones and drone components	120	21.63 mn	3 years until FY23	-	Ministry of Civil Aviation	https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1755157 https://egazette.gov.in/WriteReadData/2021/230076.pdf
14	Production Linked Incentive Scheme for semiconductor production	76,000	13.71 bn	5 years until FY27	-	Centre for Development of Advanced Computing; India's semiconductor Mission; Ministry of Electronics and Information Technology	https://www.meity.gov.in/writereaddata/files/Notification%20Scheme%20for%20setting%20up%20Semiconductor%20Fabs%20in%20India.pdf

Annexure 2.2: Foreign Domestic Investment (FDI) Policy Changes

FDI Policy Changes (effective from October 2020)			
Sector	**Scope of Activity**	**% of Equity/FDI Cap**	**Entry Route**
Manufacturing	Manufacturing activities may be either self-manufacturing by the investee entity or contract manufacturing in India through a legally tenable contract, whether on Principal to Principal or Principal to Agent basis. Further, a manufacturer is permitted to sell its products manufactured in India through wholesale and/or retail, including through e-commerce, without Government approval.	100 under government route (Notwithstanding the FDI policy provisions on trading sector)	Automatic
Civil Aviation- Airports	Greenfield Projects	100	Automatic
	Existing Projects	100	Automatic
Construction Development: Townships, Housing, Built-up Infrastructure	Construction-development projects (which would include development of townships, construction of residential/commercial premises, roads or bridges, hotels, resorts, hospitals, educational institutions, recreational facilities, city and regional level infrastructure, townships)	100	Automatic
E-commerce activities	Subject to provisions of FDI Policy, e-commerce entities would engage only in Business to Business (B2B) e-commerce and not in Business to Consumer (B2C) e-commerce.	100	Automatic
Railway Infrastructure	Construction, operation and maintenance of the following: (i) Suburban corridor projects through PPP, (ii) High speed train projects, (iii) Dedicated freight lines, (iv) Rolling stock including train sets, and locomotives/coaches manufacturing and maintenance facilities, (v) Railway Electrification, (vi) Signaling systems, (vii) Freight terminals, (viii) Passenger terminals, (ix) Infrastructure in industrial park pertaining to railway line/sidings including electrified railway lines and connectivities to main railway line and (x) Mass Rapid Transport Systems.	100	Automatic
Infrastructure Companies in Security Markets	Infrastructure companies in Securities Markets, namely, stock exchanges, commodity exchanges, depositories and clearing corporations, in compliance with SEBI Regulations	49	Automatic
Pharmaceuticals	Greenfield	100	Automatic
	Brownfield	100	Automatic up to 74%Government route beyond 74%

Details of Conditions for Investment

Annexure 2.1: Production Linked Incentive Schemes

Conditions for Investment in the Civil Aviation Sector
Foreign airlines are allowed to participate in the equity of companies operating Cargo airlines, helicopter, and seaplane services, as per the limits and entry routes.
Foreign airlines are also allowed to invest in the capital of Indian companies, operating scheduled and non-scheduled air transport services, up to the limit of 49 per cent of their paid-up capital. Such investment would be subject to the following conditions: i. It would be made under the government approval route; ii. The 49 per cent limit will subsume FDI and FPI investment; iii. The investments so made would need to comply with the relevant regulations of SEBI, such as the Issue of Capital and Disclosure Requirements (ICDR) Regulations/Substantial Acquisition of Shares and Takeovers (SAST) Regulations, as well as other applicable rules and regulations; iv. All foreign nationals likely to be associated with Indian scheduled and non-scheduled air transport services, as a result of such investment shall be cleared from a security viewpoint before deployment; and v. All technical equipment that might be imported into India as a result of such investment shall require clearance from the relevant authority in the Ministry of Civil Aviation.
In addition to the above conditions, foreign investment in M/s Air India Ltd shall be subject to the following conditions: i. Foreign investment(s) in M/s Air India Ltd, including that of foreign airline(s), shall not exceed 49 per cent either directly or indirectly except in case of those NRIs, who are Indian Nationals, where foreign investment(s) is permitted up to 100 per cent under automatic route. ii. Substantial ownership and effective control of M/s Air India Ltd shall continue to be vested in Indian Nationals as stipulated in Aircraft Rules, 1937.

Figure 2.2.2: Conditions For Investment In Construction Development

Conditions for Investment in Construction Development
The investor will be permitted to exit on completion of the project or after the development of trunk infrastructure such as, roads, water supply, street lighting, drainage, and sewerage.
The project shall conform to the norms and standards, including land use requirements and provision of community amenities and common facilities, as laid down in the applicable building control regulations, bylaws, rules, and other regulations of the State Government/Municipal/Local Body concerned.
The Indian investee company will be permitted to sell only developed plots. For this policy “developed plots” will mean plots where trunk infrastructure, that is, roads, water supply, street lighting, drainage and sewerage, have been made available.
The Indian investee company shall be responsible for obtaining all necessary approvals, including those of the building/layout plans, developing internal and peripheral areas and other infrastructure facilities, payment of development, external development, and other charges, and complying with all other requirements as prescribed under applicable rules/byelaws/regulations of the State Government/Municipal/Local Body concerned.
The state government/municipal/local body concerned, which approves the building/development plans, will monitor compliance with the above conditions by the developer.

Figure 2.2.3: Guidelines For Investment In E-Commerce Activities

Guidelines for Investment in E-commerce activities	
i.	100 per cent FDI under automatic route is permitted in the marketplace model of e-commerce.
ii.	FDI is not permitted in the inventory-based model of e-commerce.
iii.	Marketplace e-commerce entity will be permitted to enter into transactions with sellers registered on its platform on a Business-2-Business basis.
iv.	E-commerce marketplace may provide support services to sellers in respect of warehousing, logistics, order fulfilment, call centre, payment collection, and other services.
v.	E-commerce entity providing a marketplace will not exercise ownership or control over the inventory i.e. goods purported to be sold. Such ownership or control over the inventory will render the business into an inventory-based model. Inventory of a vendor will be deemed to be controlled by an e-commerce marketplace entity if more than 25% of purchases of such vendor are from the marketplace entity or its group companies.
vi.	An entity having equity participation by an e-commerce marketplace entity or its group companies or having control on its inventory by an e-commerce marketplace entity or its group companies, will not be permitted to sell its products on the platform run by such marketplace entity.
vii.	In the marketplace model goods/services made available for sale electronically on the website should provide the name, address, and other contact details of the seller. Post-sales, delivery of goods to the customers, and customer satisfaction will be the responsibility of the seller.
viii.	In the marketplace model, payments for sale may be facilitated by the e-commerce entity in conformity with the guidelines of the Reserve Bank of India.
ix.	In the marketplace model, any warrantee/guarantee of goods and services sold will be the responsibility of the seller.
x.	E-commerce entities providing a marketplace will not directly or indirectly influence the sale price of goods or services and shall maintain a level playing field.
xi.	E-commerce marketplace entity with FDI shall have to obtain and maintain a report of the statutory auditor by 30 September every year for the preceding financial year confirming compliance of the e-commerce guidelines.

Figure 2.2.4: Conditions For Investment In Infrastructure Companies In The Security Market

Conditions For Investment In Infrastructure Companies In The Security Market	
i.	Foreign investment, including investment by FPIs, will be subject to the Securities Contracts (Regulations) (Stock Exchanges and Clearing Corporations) Regulations 2012, and Securities and Exchange Board of India (Depositories and Participants) Regulations, 1996 as amended from time to time, and other Guidelines/Regulations issued by the Central Government, SEBI and the Reserve Bank of India from time to time.
ii.	Words and expressions used herein and not defined in these regulations but defined in the Companies Act, 2013 (18 of 2013) of the Securities Contracts (Regulation) Act, 1956 (42 of 1956) or the Securities and Exchange Board of India Act, 1992 (15 of 1992) or the Depositories Act, 1996 (22 of 1996) or in the concerned Regulations issued by SEBI shall have the same meanings respectively assigned to them in those Acts/ Regulations.

Figure 2.2.5: Conditions For Investment In The Pharmaceutical Sector

Conditions For Investment In The Pharmaceutical Sector
i. 'Non-compete' clause would not be allowed in automatic or government approval routes except in special circumstances with the approval of the Government.
ii. The prospective investor and the prospective investee are required to provide a certificate along with the application for foreign investment.
iii. The government may incorporate appropriate conditions for FDI in brownfield cases, at the time of approval.
iv. FDI in brownfield pharmaceuticals, under both automatic and government approval routes, is further subject to compliance with the following conditions: a. The production level of the National List of Essential Medicines (NLEM) drugs and/or consumables and their supply to the domestic market at the time of induction of FDI, being maintained over the next five years at an absolute quantitative level. The benchmark for this level would be decided concerning the level of production of NLEM drugs and/or consumables in the three financial years, immediately preceding the year of induction of FDI. Of these, the highest level of production in any of these three years would be taken as the level. b. R&D expenses being maintained in value terms for 5 years at an absolute quantitative level at the time of induction of FDI. The benchmark for this level would be decided concerning the highest level of R&D expenses that have been incurred in any of the three financial years immediately preceding the year of induction of FDI. c. The administrative Ministry will be provided with complete information about the transfer of technology, if any, along with the induction of foreign investment into the investee company. d. The administrative ministry/ministries, that is, Ministry of Health and Family Welfare, Department of Pharmaceuticals, or any other regulatory agency/development as notified by the central government from time to time, will monitor the compliance of conditionalities.

Infrastructure and Logistics

Annexure 3.1: IFSCA and the GIFT City
Section 12 of the IFSCA Act lays down the following functions to be performed by IFSCA:

- Advance and manage the financial products, financial services, and financial institutions in the IFSCs;

- Manage financial services, financial institutions, and financial products in an IFSC which have been authorised before the commencement of the IFSCA Act by any regulator of IFSC e. RBI, SEBI, etc.; and

- Manage the financial services, financial institutions, and financial products in an IFSC as the Indian government may notify from time to time.

For capital markets, the IFSCA has proposed a unified regulatory framework specifying the requirements for

a) issuance and listing of various types of securities; and
b) initial and continuous disclosures.

In Budget FY2022, the role of GIFT City as the hub for a "world-class fintech hub" has been spelt out. The proposed framework by IFSCA is expected to provide an ecosystem for capital raising and listing by Fintech and other start-up companies.

To ensure that capital markets in IFSCs support the financing of innovative business models especially those in the areas of Environment, Social and Governance (ESG), fin-tech, corporate restructurings, etc., the framework proposed by IFSCA also provides for the issuance and listing of securities by Start-ups, Small and Medium Enterprises (SMEs) and Special Purpose Acquisition Company (SPAC). Further, an enabling framework has been proposed for the issuance and listing of debt securities including those focusing on ESG and Smart-Cities.

In addition, globally, the Special Purpose Acquisition Companies (SPAC) has become an important structure to raise capital through IPOs for acquiring companies or assets. To keep pace with the evolving market environment, IFSCA is proposing a suitable framework for capital raising and listing of SPAC on the recognised stock exchanges in IFSCs.

Considering the important role of Capital markets in bridging the gap between investors and issuers of green bonds, social bonds, sustainable bonds, and sustainability-linked bonds, IFSCA aims to make IFSC at GIFT City a prominent international centre for sustainable finance. The proposed framework by IFSCA is expected to support the needs for environmental, Social, and Governance financing.

The proposed framework[1] shall facilitate issuers from across the jurisdictions to raise capital for a variety of needs and list their securities at the international stock exchanges in IFSCs.

In the process, GIFT envisages offering a state-of-the-art infrastructure encompassing all basic urban infrastructure elements along with excellent external connectivity.[2] Companies from Financial Services, Technology, and all other services sectors will be targeted as potential occupants within the city. The range includes the following:

International Financial Service Centre (IFSC)
International TechnoPark & International Market Zone
Commodity Exchanges
Global trading exchanges
Insurance
Offshore Banking
IT/ ITeS
KPO/ BPO services

Experts more or less agree that "despite being a late entrant in setting up its first IFSC, India is gaining momentum in the IFSC space with much faster speed and is poised to win the race globally".[3] The Singapore International Arbitration Centre has set up its representative office in GIFT city.

Till the end of the calendar year 2020, Phase-I of the project involving about 11.2 million square feet is under various stages of development. "About 3.4 million square feet is fully developed and operational, 2.3 million square feet is under construction and 5.5 million square feet is under planning," according to Tapan Ray, Group CEO and MD of GIFT City Company Ltd in a comment to Indian Express newspaper.[4] The development covers both the Special Economic Zones and the domestic tariff area. The SEZ has the IFSC, international exchanges, and IFSC banking units while the domestic tariff area has a hotel, the Jamnabai Narsee School as well as housing various offices. All of them taken together, about 20 per cent of the proposed greenfield development at GIFT City has been completed in the last 10 years. About ₹2,000 crore (S$361 million) has been spent on infrastructure and the project has attracted ₹11,000 crore (S$1.98 billion) of investments in Phase-I.

1 Consultation Paper on Proposed International Financial Services Centres Authority (Issuance and Listing of Securities) Regulations, 2021, PIB Delhi, 10 March 2021, https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1703854.
2 For more details refer to https://www.giftgujarat.in/about.
3 Anish Jaipuriar, Ashutosh Nagar, Shivam Tiwari, "International Financial Services Centres Authority: All About The Gift City Regulator (Part II)", mondaq.com, 12 March 2021, https://www.mondaq.com/india/financial-services/1046280/international-financial-services-centres-authority-all-about-the-gift-city-regulator-part-ii.
4 Avinash Nair, "Explained: What is the status of Gujarat's GIFT city project?", The Indian Express, 6 February 2021, https://indianexpress.com/article/explained/explained-what-is-the-status-of-gujarats-gift-city-project-7176278/.

States

Annexure 4 a) i) Industrial Policy - Infrastructure

States	Infrastructure		
	Conducive Industrial Infrastructure.	Land banks and availability of government land on lease for industrial purposes.	Support for Environmental Infrastructure & Initiatives for Sustainable Development.
Gujarat	The GARUD Organisation was formed to ensure the easy movement of goods (inter & intra) state and increase exports. The infrastructure created under this authority will support industries to incur fewer production costs and therefore will have a competitive edge against other developing countries. Industrial infrastructure, the establishment of industrial parks by private investors, and dormitory housing.	"Government Land" on lease to industrial enterprises at 6 per cent of the market rate for a long term of up to 50 years based on the prevailing government policy.	
Tamil Nadu	The government may at its discretion approve higher incentives/ concessions and relax the conditions mentioned in the Policy in exceptional circumstances for deserving cases, giving due weightage to investment, direct and indirect employment generated, and potential for attracting further investment through vendors and ancillaries. (Industrial parks and land bank creation, transport and logistics (industrial corridors, connectivity), Energy and utilities (power, water resource management), IT infrastructure.	SIPCOT now allows allottees who have used up 50% of their allotted area, to construct Plug & Play facilities and sublease it to others. (Refer to Annex for details)	Green Industry Incentive – Industrial projects undertaking green initiatives for recycling waste and water for industrial use and sustainable energy usage, coupled with online monitoring (wherever applicable) indicated below, shall be eligible for a 25% subsidy on the cost of setting up such environmental protection infrastructure in the following solution areas subject to a limit of Rs. 1 cr.
Karnataka	Karnataka Industrial Area Development Board (KIADB) has developed 170 Industrial Areas spread over 82,289 acres across the State and has allotted over 20,188 units. KIADB has also acquired 74,727 acres of land in favour of 483 units under the SUC scheme. Karnataka Small Scale Industrial Development Corporation (KSSIDC) has allotted Industrial Sheds/ Plots to 13,793 units in its 190 industrial estates across the State. The State also has 38 Operational Special Economic Zones. Modified Industrial Infrastructure Upgradation Scheme.	KIADB reforms (Refer to the Policy document for details)	Sustainability and responsible industrialisation (Refer to the Policy document for details)

Maharashtra	Augmenting Infrastructure and ensuring land availability, leveraging special projects (Maharashtra Samruddhi Mahamarg - Delhi Mumbai Industrial Corridor (DMIC), Shendra Bidkin Industrial area (SBIA), Dighi Port Industrial Area (DPIA), Sagarmala and Coastal Economic Zones (CEZs)), Critical Industrial Infrastructure Fund, Promotion of private industrial infrastructure development.	MIDC shall create a land bank across the State based on-demand assessment.	Green Industrial Assistance
Uttar Pradesh	Industrial Infrastructure and Common Facility Centers - Private sector investment in Greenfield mini-industrial parks of 20-100 acres for MSMEs will be encouraged.	The State Government will identify vacant land that can be used for Land Banks for the industry in industrial areas/ zones. This policy intends to subsequently make available these land parcels at a competitive price to the investors.	Sustainable growth - The policy intends to incentivise the installation of Effluent Treatment Plants and Rain Water Harvesting. The industrial development authorities will strive to install Common Effluent Treatment plants in its industrial estates/ parks/ areas. The Government will also encourage greater compliance of the industries with the environmental standards and facilitate them in the adoption of technologies to reduce air and water pollution.

4 a) ii) Industrial Policy – Research and Innovation

States	Research and innovation	
	Promote Start-up & Innovation	Support for Research & Development in the state
Gujarat	New Scheme: Sustenance Allowance, Seed Support, Soft Skill Assistance, for mid-level Pre-Series A funding of start-ups, Acceleration Programs, Promotional Events, Nodal Institutes and Mentoring Assistance.	Funds allocated to assist R&D efforts.
Tamil Nadu	Tamil Nadu Start-up and Innovation Policy 2018-2023, Digital Accelerator scheme (Refer to Annex for details)	This policy includes R&D as part of Eligible Fixed Assets. Stand-alone R&D projects shall be eligible for the following Incentives (Refer to Annex for details)
Karnataka	Innovate Karnataka initiative (Refer to the Policy document for details)	Capital Subsidy for supporting R&D (Refer to the Policy document for details)
Maharashtra	Promoting ecosystem for start-ups - creating a facilitating environment involving young entrepreneurs to enable the sharing of their ideas and help them by handholding, mentoring, and providing them with financial assistance.	Promoting Research and Development (R&D) - protection of intellectual property rights. Other initiatives (Refer to the Policy document for details)
Uttar Pradesh	1. Regulatory simplification and handholding 2. Funding support and incentives 3. Incubation Support	Subsidies and assistance are provided for industrial research, research, and quality development (Agro and food processing) and research facilities (Agro and food processing). (Refer to the Policy document for details)

4 a) ii) Industrial Policy – Research and Innovation

States	Focus/thrust sectors	
	Special focus on the promotion of Service Sector MSMEs	Promotion of Thrust Sectors
Gujarat	Besides the 22 service categories already defined in the Gujarat Industrial Policy 2015, the following champion services are identified to cover them under eligible service sector for incentives (Refer to the Policy document for details)	Core sectors: The policy will give a further boost to these sectors to empower the global competitiveness of Gujarat's industrial ecosystem in these sectors
Tamil Nadu	The existing policy for reservation of 20% of land area in SIPCOT Industrial Parks for MSMEs shall continue. The Government of Tamil Nadu supports MSMEs through a separate policy.	The existing policy for reservation of 20% of land area in SIPCOT Industrial Parks for MSMEs shall continue. The Government of Tamil Nadu supports MSMEs through a separate policy. (Refer to the Policy document for details)
Karnataka	Promotion of MSMEs (Refer to the Policy document for details)	Industry, R&D, Intellectual Property Rights (IPR), Technology Adoption & Innovation, Cluster Development Initiatives, Sustainability, and Responsible Industrialisation
Maharashtra	Financial incentives for infrastructure in industrial areas for MSMEs, women, and SC/ST entrepreneurs (Refer to the Policy document for details)	Promotion of thrust sectors (Refer to the Policy document for the list of sectors)
Uttar Pradesh	1. Improving the flow of capital and credit for MSMEs 2. Capacity building 3. Quality and Standards 4. Industrial Infrastructure and Common Facility Centres 5. Marketing 6. Good Governance 7. Miscellaneous (Special promotional provisions for the weaker section and women, Sick Industries)	1. IT/ITeS industry and IT Start-Ups 2. Electronics Manufacturing 3. Agro & Food Processing 4. Dairy 5. New & Renewable Energy 6. Handloom & Textile Industry 7. Export-oriented units 8. Tourism

Annexure a) iv) Industrial Policy – Facilitation

States	Facilitation	
	Ease of doing business	Attracting Large/Mega and Ultra-Mega Investments
Gujarat	Gujarat Single Window Clearance Act, 2017; Strengthening of the Investor Facilitation Agency (IFA); Gujarat Micro, Small and Medium Enterprises (Facilitation of Establishment and Operation) Act, 2019	Delinking of incentives from SGST by extending incentives based on eligible Fixed Capital Investment (FCI) to large industries for setting up manufacturing operations in the state in the form of capital subsidy. There is no upper ceiling on the amount of incentive to be given to any particular unit. (Refer to the Policy document for details)
Tamil Nadu	Single Window Facility, Investor Facilitation Desk, Biz Buddy	The Government may at its discretion approve higher incentives /concessions and relax the conditions mentioned in the Policy in exceptional circumstances for deserving cases, giving due weightage to investment, direct and indirect employment generated, and potential for attracting further investment through vendors and ancillaries.
Karnataka	Simplifying single-window clearance mechanism; Simplification of regulatory processes and procedures.	(Types of Support): Exemption from Stamp Duty, Concessional Registration Charges, Reimbursement of Land Conversion Fee, Subsidy for setting up Effluent Treatment Plant (ETP), Subsidy for setting up Common Effluent Treatment Plant (CETP)/Industrial Hazardous waste disposal projects by a private investor, Investment subsidy for anchor industries.// Investment promotion subsidy based on turnover for Large, Mega, Ultra Mega, and Super Mega Enterprises
Maharashtra	Single window portal, Strengthening Maharashtra Industry, Trade & Investment Facilitation Cell (MAITRI)	Attracting Large, Mega, and Ultra-Mega Investments. Large Scale Industries, Mega and Ultra Mega Projects. (Refer to the Policy document for details)
Uttar Pradesh	1. Simplification of procedures 2. Time-bound clearances 3. Single Window Clearance 4. Ease for Commercial activities in the state 5. Industrial Security 6. Other regulatory simplification enablers 7. State Investment Promotion Board (SIPB)	The policy intends to offer a customised package of incentives to attract such investments. (Refer to section 5.13.1 of the Policy document for more details)

Annexure a) v) Links/key resources

States	Links/Key Resources
Gujarat	https://eoibrasilia.gov.in/?pdf11603
Tamil Nadu	https://www.indembassybern.gov.in/docs/1617966871Tamil_Nadu_Industrial_Policy_2021.pdf
Karnataka	https://www.investkarnataka.co.in/wp-content/uploads/2020/11/Booklet-final-.pdf
Maharashtra	https://maitri.mahaonline.gov.in/PDF/Maharashtra%20New%20Industrial%20Policy-2019.pdf
Uttar Pradesh	http://udyogbandhu.com/pdffile/Draft_Industrial_Investment_Employment_Promotion_Policy_UP_2017.pdf

Annexure a) v) Links/key resources

States	Name of the Scheme	Date of announcement	Start date	End date	Total tenure	Sources/Links
Gujarat	Gujarat Solar Power Policy 2021	19/12/2020	19/12/2020	31/12/2025	5 years	https://suryagujarat.guvnl.in/Gujarat-Solar-Power-Policy-2021.pdf
Tamil Nadu	Tamil Nadu Solar Policy 2019	04/02/2019	04/02/2019	The policy shall remain valid until superseded or modified by another policy	The Government will review the implementation of this policy annually to evaluate the actual results against policy objectives	http://tidco.com/wp-content/uploads/2020/04/tamil-nadu-solar-policy-2019-min.pdf
Karnataka	Draft Karnataka Renewable Energy Policy 2021-2026	13/10/2021	2021	2026	5 years	https://kredl.karnataka.gov.in/storage/pdf-files/Scrollfiles/Draft%20Karnataka%20Renewable%20Energy%20Policy%202021-2026_13%20Oct%202021.pdf
Maharashtra	Unconventional Energy Generation Policy - 2020	31/12/2020	31/12/2020	31/12/2025	4 years	https://india-re-navigator.com/public/tender_uploads/utility_rooftop_wind_policy-602fb08002107.pdf
Uttar Pradesh	Uttar Pradesh Solar Energy Policy 2017	2017	2017	2022	5 years	http://www.cbip.org/policies2019/PD_07_Dec_2018_Policies/Uttar%20Pradesh/1-Solar/1%20summary%20UP%20Solar%20Policy-2017.pdf

Annexure a) v) Links/key resources

States	Name of the Scheme	Targeted Segments	Department/ Institution	Short Description/Objection	Eligibility
Gujarat	Gujarat Solar Power Policy 2021	Any individual or company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person shall be eligible for setting up of SPSs, either for captive use and/or for selling of electricity to the Distribution Licensee or Third Party whether or not under the renewable energy certificate (REC) mechanism subject to provisions of this policy and following the Electricity Act - 2003, as amended from time to time.	Energy and Petrochemicals Department	1. To rapidly scale up the State's solar energy capacity to contribute to India's overall renewable energy targets keeping in mind India's commitments under international climate agreements. 2. To reduce the dependence on fossil fuels and further energy security in the State. 3. To further the Sustainable Development Goals (SDG) of Gujarat. 4. Employment generation and skill enhancement and promotion of local manufacturing facilities. 5. To establish core technical competence in professionals by promoting research, development, deployment, and innovation in the solar energy sector. 6. To spread awareness about solar power technologies amongst all the electricity consumers. 7. To create an investment-friendly environment that can provide a win-win situation for all stakeholders in the Power Sector.	Gujarat Energy Development Agency (GEDA) shall be the State Government Nodal Agency for the facilitation and implementation of this policy. The nodal agency will facilitate and assist the project developers to undertake the following activities in achieving the objectives of the Policy. - Registration of projects; - Respond to queries and problems of Developers of Solar Power Projects; - Accreditation and recommending Solar Power Projects for registering with the Central Agency under the REC mechanism; - Certifying the commissioning of Solar Projects.

Tamil Nadu	Tamil Nadu Solar Policy 2019	Solar energy producers, solar energy operators, solar energy researchers	Energy Department	- Use regulatory mechanisms to ensure that Tamil Nadu will achieve, or exceed, the solar energy portfolio obligations as may be determined by the Tamil Nadu Electricity Regulatory Commission (TNERC) from time to time. - Following regulations, facilitate open access to the public electricity grid and thereby create opportunities for grid-connected distributed generation of solar power. - Encourage and incentivise electricity consumers to set up solar energy systems. - Establish a 'Single Window System' for technical support, funding support, and project clearance through cooperation between the concerned Government departments. - Encourage public-private partnerships and joint ventures to mobilise investments in solar energy projects, manufacturing facilities, research, and technology development. - Facilitate 'Ease of Doing Business in the solar energy sector. - Create an investment-friendly environment that provides opportunities for private individuals, companies, local bodies, government departments, and others to contribute to and participate in the generation of solar energy, particularly for the electricity consumer to become a "prosumer" (a producer-consumer). - Create a road map to achieve the objectives of the "National Renewable Energy Policy" to be issued by the Central government.	Tamil Nadu Energy Development Agency (TEDA) and Tamil Nadu Electricity Board (TANGEDCO) are managing collaborations and partnerships. Refer to these agencies for more details.

Karnataka	Draft Karnataka Renewable Energy Policy 2021-2026	Focus markets: 1. Green Energy Corridor 2. Renewable Energy Parks 3. Solar Energy Projects 4. Wind Energy Projects 5. Solar-Wind Hybrid Energy Projects 6. Energy Storage Projects for Renewable Energy 7. Biomass Projects 8. Co-generation Projects 9. Waste to Energy Projects 10. Mini and Small-Hydro Projects 11. New Initiatives/ Pilot Projects/R&D	Karnataka Renewable Energy Development Limited	1. To facilitate the development of 10 (Ten) GW of additional RE projects with or without energy storage systems in the State, including up to 1 (One) GW of Rooftop solar PV projects; 2. To attract investment in the RE sector and development of the State economy; 3. To tap RE potential in the State and use available resources for the development of RE projects to meet the RE demand within the State and export power outside Karnataka; 4. To achieve the RPO target(s) as specified by the KERC from time to time; 5. To develop Renewable Energy Parks including hybrid parks in the State; 6. To encourage private sector participation in transmission network/Green Energy Corridor projects; 7. To develop an ecosystem for distributed generation through the Solarisation of agriculture feeders and pumps which can help deferment of transmission and distribution capacity addition and reduction in losses; 8. To promote the adaptation of electric vehicles and de-carbonize transportation in the State by encouraging the use of cleaner renewable energy in the transportation sector; 9. To promote energy storage projects in the State; 10. To create an energy storage market in the State to integrate more RE into the grid and offer grid support services such as peak reduction, curtailment management, contribution to reliability needs, transmission deferrals, intraday and seasonal variation management, and others; 11. To promote the development of wind-solar hybrid projects; 12. To promote the development of floating solar including hybridisation of floating solar with existing hydro stations; 13. To promote the generation of energy through biomass, and waste-to-energy; and 14. To promote new initiatives and emerging energy technologies in the State.	Nodal Agency- Karnataka Renewable Energy Development Limited (KREDL) is the State Nodal Agency for the implementation of this Policy. However, the smart grid projects as specified in the Karnataka Electricity Regulatory Commission (Smart Grid) Regulations, 2015 shall be implemented by the transmission licensee and/or distribution licensee. Refer to the link for the State-Level Allotment Committee.

Maharashtra	Unconventional Energy Generation Policy - 2020	Private developers	Department of Industry, Energy, and Labour	• Considering the increasing demand for electricity in the state, there is a potential to increase the installed capacity by 17,360 KW in the next five years. There is a need to set up such environmentally friendly non-conventional energy generation projects. • To help in increasing employment opportunities and investment through a policy that supports the investment made by the developer in the state while setting up such projects. • To have a policy of the State Government to supplement the requirements of the Unconventional Energy Policy of the Central Government. • Establishment of projects subject to the provisions of various Acts of the State Government and mainly the Electricity Act 2003 and the rules under it; rules, regulations, codes, etc. fixed by the Maharashtra Electricity Regulatory Commission and improvements thereto from time to time.	Registered companies, local/ civic bodies, government bodies, partnership bodies, private individuals, semi-government bodies, co-operative societies, and farmers' groups are allowed to set up projects as per this norm. According to this, a committee constituted under the chairmanship of the Hon'ble Minister of Energy will select the company/institution which is allowed in the project where financial participation/ grant is being given by the State Government, after evaluating their financial and technical capacity, for the work of the project will be awarded. The selection criteria will be decided by the Maharashtra State Electricity Board. The members of this committee will be the Principal Secretary, Department of Energy as well as the Chairman and Managing Director of Mahagenco, Mahatransco, and MSEDCL and the Director General of MEDA shall be the convener of this committee.

Uttar Pradesh	Uttar Pradesh Solar Energy Policy 2017	Solar project developers -Projects set up for 100% captive use/ Group captive use or to sell part generation to an Electricity Distribution Company or third party.	Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA)	1. Encourage participation of the Private Sector and provide investment opportunities to set up solar power projects in the state. 2. Support in providing environment-friendly and affordable Power for All. 3. Promote Research & Development, innovations, and skill development in the State. 4. Achieve target of 8% Solar Renewable Purchase Obligation (Solar RPO) by 2022	1. State Government will provide a subsidy of Rs 15000/KW to a maximum limit of subsidy Rs 30000/- per consumer on a first come first basis for the first 100 MW applications submitted online to UPNEDA. 2. In case the project installation is delayed for more than 6 months, the subsidy shall be withdrawn by UPNEDA. 3. Grid-connected Solar Power Plants of capacity up to 10 kW, will be exempted from the inspection by the State Electrical Inspector.

Annexure c) i) Electric Vehicle Policy – Part (i)

States	Name of the Scheme	Date of announcement	Start date	End date	Total tenure	Sources/Links
Gujarat	Gujarat State Electric Vehicle Policy 2021	22/06/2021	01/07/2021	01/07/2025	4 years	https://www.transportpolicy.net/wp-content/uploads/2021/06/Gujarat-State-EV-Policy-2021.pdf
Tamil Nadu	Tamil Nadu Electric Vehicle Policy 2019	26/08/2019	FY2019	FY2029	10 years	https://powermin.gov.in/sites/default/files/uploads/EV/Tamilnadu.pdf
Karnataka	Karnataka Electric Vehicle and Energy Storage Policy 2017	25/09/2017	FY2017	FY2022	5 years	https://indianstates.csis.org/uploads/KarnatakaStateElectricVehicleEnergyStoragePolicy2017.pdf
Maharashtra	Maharashtra State Electric Vehicle Policy - 2021	01/02/2018	14/09/2021	31/03/2025	4 years	https://maitri.mahaonline.gov.in/PDF/EV%20Policy%20GR%202021.pdf
Uttar Pradesh	Uttar Pradesh Electric Vehicle Manufacturing and Mobility Policy 2019	07/09/2019	FY2019	FY2024	5 years	https://evreporter.com/wp-content/uploads/2020/07/UP_Electrical-vehicle-policy_english_Aug7_2019-1.pdf

Annexure c) ii) Electric Vehicle Policy – Part (ii)

States	Name of the Scheme	Targeted Segments	Department/ Institution	Short Description/Objection	Eligibility
Gujarat	Gujarat State Electric Vehicle Policy 2021	**Charging Infrastructure** - Privately-owned, DisCom-owned, and Investor-owned charging and battery swapping stations are encouraged under this Policy. **Manufacturing of EVs and their Components** - All provisions of the Gujarat Industrial Policy 2020, subsequent applicable policies, and government resolutions (G.R.), as amended from time to time, shall apply to parties intending to set up or upgrade their facilities for manufacturing in the EV sector.	Ports and Transport Department, Energy and Petrochemicals Department, Gujarat Energy Research & Management Institute (GERMI)	(i) To transition the state's transportation sector towards electric mobility. (ii) To make Gujarat a manufacturing hub for electric vehicles and ancillary equipment. (iii) To encourage start-ups and investment in the field of electric mobility and associated support sectors such as data analytics and information technology. (iv) To improve the quality of the environment by reducing air pollution.	(i) The Policy shall apply to all classes of electric vehicles that have taken subsidy under the Government of India's FAME II scheme dated 8th March 2019, F. No 1(1)/2019-AEI, and any amendments thereafter. (ii) The incentives for setting up a charging station shall apply to charging stations meeting the guidelines and standards of the Ministry of Power Circular, dated 1st October 2019, and any amendments thereafter.

Tamil Nadu	Tamil Nadu Electric Vehicle Policy 2019	Electric Vehicle manufacturers and Charging Infrastructure	The Industries Department, The Energy Department, The Transport Department	1. Create robust infrastructure for electric vehicles including adequate power supply and a network of charging points with favourable power tariffs. 2. Promote innovation in EVs for automotive and shared mobility by providing the ecosystem and infrastructure to make Tamil Nadu, the EV Hub of India. 3. Create a pool of skilled workforce for the EV industry through the technical institutions available in the State and create new jobs in the EV industry. 4. Make Tamil Nadu the preferred destination for Electric Vehicles and component manufacturing units including battery and charging infrastructure. 5. Create a conducive environment for Industry and Research Institutions to focus on cutting-edge research in EV Technologies and reap the benefit from the outcome. 6. Recycle and reuse used batteries and dispose of the rejected batteries in an environment-friendly manner to avoid pollution.	The condition of eligibility for availing incentives under the special package shall be that the units engaged in EV, their component, or charging infrastructure manufacture shall make investments above ₹50 crores (₹500 million) and create at least 50 direct jobs in the form of new projects or expansion projects. Investments made from April 1, 2018, will be considered eligible for availing incentives.
Karnataka	Karnataka Electric Vehicle and Energy Storage Policy 2017	Electric Vehicle manufacturing, Charging Infrastructure, and R&D and skill development	Commerce and Industries Department	1. To maintain the lead share of Karnataka as a preferred destination for attracting investments in the manufacture of Electric Vehicles. 2. To attract investments of Rs 31,000 crore and create employment opportunities for 55,000 persons both from the supply & demand side. 3. To create a conducive environment for transition to an Electric Vehicle environment from Internal Combustion (IC) engines. 4. To provide opportunities for developing R&D in Electric Mobility.	Refer to the "Incentives and Concessions" section for more information.

Maharashtra	Maharashtra State Electric Vehicle Policy - 2021	The state government shall engage and encourage financial institutions and banks to offer preferential interest rates for EV customer segments like e-autos, goods carriers, and taxis. Fleet operators (applies to e-commerce companies, last-mile delivery/logistics players, and mobility aggregators operating in urban areas. Charging infrastructure. Refer to the link for more information.	(Steering Committee) Maharashtra State EV Secretariat	1. In the five targeted urban agglomerations in the state3, achieve 25% electrification of public transport and last-mile delivery vehicles by 2025. 2. Convert 15% of Maharashtra State Road Transport Corporation's (MSRTC) existing bus fleet4 to electric. 3. Make Maharashtra the country's top producer of BEVs in India, in terms of annual production capacity. 4. Target establishment of at least one Gigafactory for the manufacturing of advanced chemistry cell (ACC) batteries in the state. 5. Promote research and development (R&D), innovation, and skill development across the EV ecosystem in the state.	Refer to the Policy document for more information.
Uttar Pradesh	Uttar Pradesh Electric Vehicle Manufacturing and Mobility Policy 2019	1. Manufacturing 2. Charging infrastructure (DISCOM) 3. Demand Creation	Ministry of Power	1. To attract investments of over ₹40,000 crore in the next five years across the electric mobility ecosystem with an employment potential for 50,000 people. 2. To launch 1000 electric buses (BEVs/ FCEVs) and achieve 70 per cent EV public transportation on identified green routes in identified 10 EV cities by 2030. 3. To phase out all conventional commercial fleets and logistics vehicles and achieve 50% EV mobility in Goods Transportation in identified 10 EV cities by 2024 and all cities by 2030. 4. To roll out nearly 10 lakh EVs, combined across all segments of vehicles, by 2024. 5. To bring in manufacturing units of high-density power storage of at least 5GWh capacity in the next 5 years for smooth electric mobility. 6. To set up nearly 200,000 slow and fast charging, swapping stations by 2024.	1. Mega Anchor Project 2. Anchor EVMU 3. Anchor EBU 4. Vendor units (EVMU/EBU) 5. Large projects Large EVMUs 6. Large EBUs 7. MSME units 8. Ultra-Mega Battery Plant 9. Service unit criteria (Slow charging, Fast category, Swapping station) Refer to the "Investment Criteria" Section in the Policy document

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