9

Infrastructure

9. INFRASTRUCTURE

9.1 Infrastructure is one of the key drivers of economic growth. Physical infrastructure mainly includes Energy, Transport and Communication. State has a resilient infrastructure network that helps in sustaining economic growth.

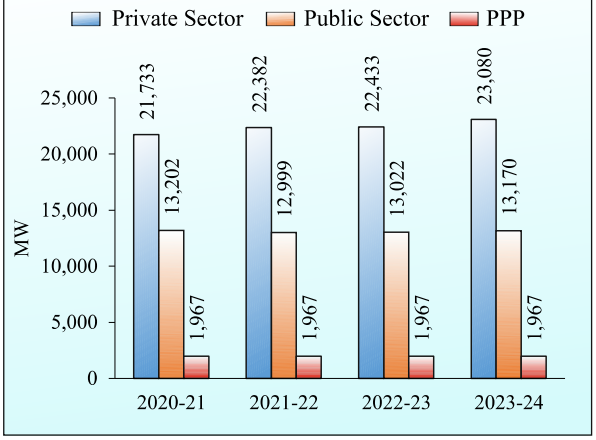
ENERGY

9.2 'Ensure access to affordable, reliable, sustainable & modern energy for all' is one the Sustainable Development Goals. The Government is taking various initiatives for energy generation through conventional & non-conventional sources and improving transmission & distribution network.

Installed capacity of Electricity

9.3 In the State as on 31st March, 2024, total installed capacity of electricity generation through conventional & non-conventional sources was 38,217 MW of which share of private sector was 60.4 per cent, that of public sector was 34.5 per cent and of public-private partnership (PPP) (Ratnagiri Gas Power Project Ltd.) was 5.1 per cent. Electricity generated mainly through thermal sources contributing about 52.5 per cent in installed capacity of the State. The sourcewise installed capacity is given in Table 9.1.

Graph 9.1 : Sectorwise installed capacity in the State



- The State ranks second in installed capacity of electricity (10.4 per cent) in India, after Gujarat (12.0 per cent)
- Share of renewable energy in total installed capacity of the State increased from 23.8 per cent to 32.1 per cent over last five years
- The share of renewable energy in installed capacity of private sector was 51.5 per cent
- The State ranks sixth in electricity generation (6.7 per cent) through renewable energy sources in India
- During 2022-23 State has highest share (12.3 per cent) in electricity consumption in India

Table 9.1 Sourcewise installed capacity

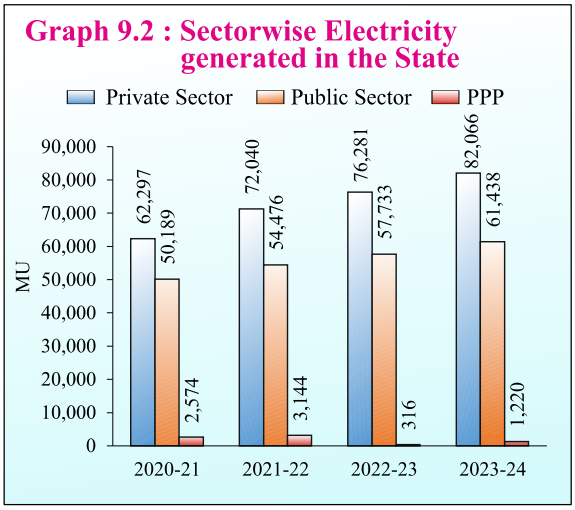
(MW)

Source	As on 31st March				Per cent change in 2024 over 2023
	2021	2022	2023	2024	
In the State	**36,902**	**37,348**	**37,422**	**38,217**	**2.1**
Thermal	21,176	20,966	20,066	20,066	0.0
Renewable	9,846	10,502	11,476	12,271	6.9
Hydro	3,061	3,061	3,061	3,061	0.0
Natural gas	2,819	2,819	2,819	2,819	0.0
Central sector allocation	**7,944**	**7,944**	**7,944**	**8,323**	**4.8**

Source : MAHAGENCO, MEDA, Central Electricity Authority, Tata Power Co. Ltd., Adani Electricity Mumbai Ltd.

Electricity generation

9.4 The total electricity generated in the State was 1,44,724 Million Units (MU) during 2023-24. The share of private, public and public-private partnership in total electricity generation in the State during 2023-24 was 56.7 per cent, 42.5 per cent and 0.8 per cent respectively.



9.4.1 In total electricity generated during 2023-24, share of electricity generated through thermal, renewable and other sources was 76.1 per cent, 17.5 per cent and 6.4 per cent respectively. Renewable energy is fastest growing source of electricity generation with CAGR of 11.8 per cent over last five years. Sourcewise electricity generated is given in Table 9.2.

Table 9.2 Sourcewise electricity generated

(MU)

Source	2020-21	2021-22	2022-23	2023-24	Per cent change in 2023-24 over 2022-23
In the State	**1,15,060**	**1,29,660**	**1,34,330**	**1,44,724**	**7.7**
Thermal	87,690	98,871	1,03,420	1,10,196	6.6
Renewable[$]	15,813	18,520	22,524	25,306	12.4
Hydro	5,593	6,144	5,956	5,252	(-)11.8
Natural gas	5,964	6,125	2,430	3,970	63.4
Received from central sector	**36,611**	**39,581**	**43,933**	**33,962[#]**	**--**

Note: 1 Unit = 1 Kilo Watt Hour $ including captive power # upto December

Source: MAHAGENCO, MAHADISCOM, Central Electricity Authority, Tata Power Co. Ltd., Adani Electricity Mumbai Ltd.

Electricity purchase

9.5 During 2022-23 per unit average cost of electricity purchased by MAHADISCOM was ₹ 5.80 and by BEST was ₹ 8.07. Electricity purchased by MAHADISCOM and BEST is given in Table 9.3.

Table 9.3 Electricity purchased by MAHADISCOM and BEST

Year	MAHADISCOM		BEST	
	Electricity purchased (MU)	Total cost (₹ Crore)	Electricity purchased (MU)	Total cost (₹ Crore)
2021-22	1,44,253	75,456	4,267	2,804
2022-23	1,55,096	90,003	4,679	3,775
2023-24[+]	1,23,565	66,387	3,851	2,442

Source: MAHADISCOM, BEST + upto December

Electricity consumption

9.6 Total electricity consumption in the State during 2023-24, upto December, was 1,21,199 MU. Aggregate consumption of electricity in the State during 2022-23 was 1,50,771 MU. The consumption of electricity in the State was highest for industrial sector (39.0 per cent) followed by agriculture sector (24.9 per cent) and domestic (21.7 per cent). Sectorwise electricity consumption is given in Table 9.4. Per capita ultimate consumption of electricity is given in Table 9.5. Installed capacity, generation & consumption of electricity in the State is given in Annexure 9.1.

Table 9.4 Sectorwise electricity consumption

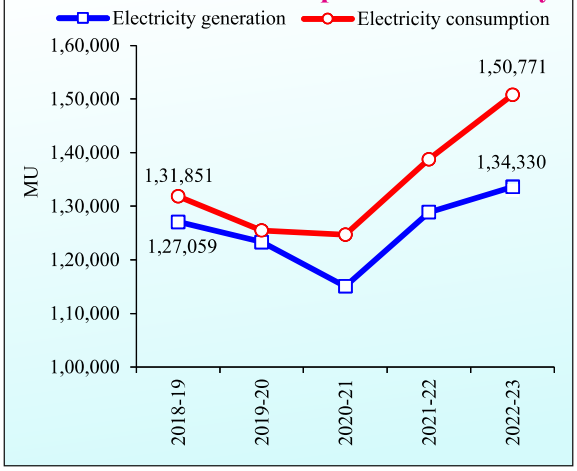
(MU)

Sector	2020-21	2021-22	2022-23	2023-24+	Per cent change in 2022-23 over 2021-22
Industrial	44,109	53,373	58,856	46,766	10.3
Agriculture	33,924	36,242	37,481	29,384	3.4
Domestic	30,229	30,699	32,741	27,263	6.7
Commercial	9,415	11,347	14,324	11,934	26.2
Public Services@	6,090	5,897	6,111	4,851	3.6
Railways	135	179	248	273	38.5
Other	789	1,042	1,010	728	(-)3.1
All	**1,24,691**	**1,38,779**	**1,50,771**	**1,21,199**	**8.6**

@ including public lighting & water supply works + upto December

Source: MAHADISCOM, BEST, Tata Power Co. Ltd., Adani Electricity Mumbai Ltd.

Graph 9.3 : Yearwise trend of generation and consumption of electricity



Graph 9.4: Sectorwise electricity consumption

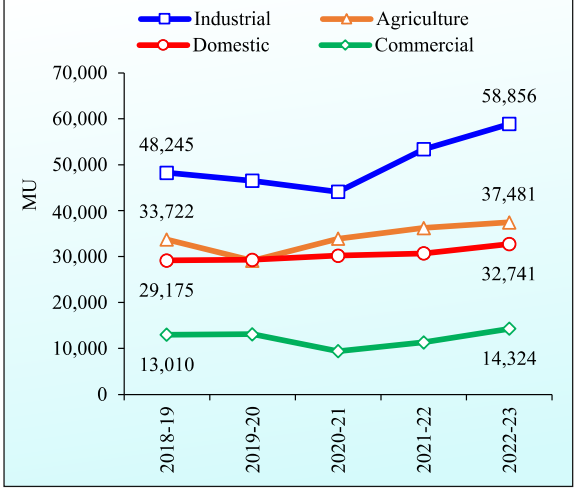


Table 9.5 Per capita ultimate consumption of electricity

(Units)

Sector	2020-21		2021-22		2022-23*	
	Maharashtra	India	Maharashtra	India	Maharashtra	India
All	**1,005.9**	**768.5**	**1,110.2**	**824.6**	**1,196.8**	**916.0**
Commercial	76.0	64.2	90.8	71.0	113.7	84.9
Industrial	355.8	236.3	427.0	273.0	467.2	302.5
Agriculture	273.7	163.3	289.9	163.8	297.5	176.6
Domestic	243.9	244.1	245.6	248.4	259.9	255.7

Source: Central Electricity Authority, MAHADISCOM, BEST, Tata Power Co. Ltd., Adani Electricity Mumbai Ltd. * Provisional

Demand and supply of electricity

9.7 Various measures taken by the State for capacity addition, improvement in Transmission & Distribution (T & D) network and energy conservation have resulted in improved supply position. Supply of electricity at average peak demand is given in Table 9.6.

Table 9.6 Supply of electricity at average peak demand

(MW)

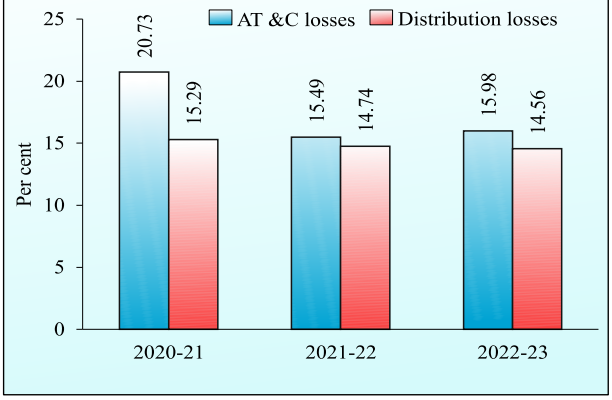
Year	Average peak demand	Supply	Surplus
2020-21	19,250	21,881	2,631
2021-22	21,221	21,750	529
2022-23	22,779	23,169	390
2023-24+	22,365	22,787	422

Source: MAHADISCOM + upto December

Transmission and Distribution network infrastructure

9.8 Improvement in Transmission and Distribution (T & D) network infrastructure is an ongoing process which involves measures such as modernisation of Extra High Voltage (EHV) sub-stations, replacement of faulty meters, load reduction on overloaded high tension (HT) & low tension (LT) circuits by providing additional transformers, erection & commissioning of new sub-stations and anti-theft drive.

Graph 9.5 : Aggregate Technical & Commercial losses and Distribution losses of MAHADISCOM



9.8.1 The transmission capacity of MAHATRANSCO was about 1,36,698 Mega Volt Ampere (MVA) with the network of 50,631 circuit km transmission lines and 728 sub-stations by the end of March, 2023. Transmission capacity has been enhanced to 1,38,598 MVA with the network line length of 51,518 circuit km with 742 sub-stations by the end of March, 2024. The transmission losses of MAHATRANSCO for 2021-22 & 2022-23 were 3.19 per cent & 3.26 per cent respectively whereas for 2023-24 upto February, it was 3.22 per cent.

9.8.2 Distribution network of MAHADISCOM is all over Maharashtra except Mumbai city. BEST has distribution network in Mumbai city. In addition to MAHADISCOM, Tata Power Co. Ltd. and Adani Electricity Mumbai Ltd. have distribution network in Mumbai suburban. The details of distribution network in the State is given in Table 9.7.

Table 9.7 Details of Distribution network in the State

(upto March, 2023)

Distribution Company	MAHADISCOM	BEST	Adani Electricity	Tata Power
Sub-stations (No.)	4,121	2,572	7,079	1,118
Circuit line length (km)	11,44,668	12,112	25,649	5,439
Transformers (No.)	8,55,190	3,585	7,252	1,146

Source: MAHADISCOM, BEST, Adani Electricity Mumbai Ltd., Tata Power Co. Ltd.

9.8.3 The contribution of MAHADISCOM to the distribution utilities in the State was 87.4 per cent followed by Adani Electricity Mumbai Ltd. (6.0 per cent), Tata Power Co. Ltd. (3.6 per cent) and BEST (3.0 per cent) during 2022-23. The distribution losses are given in Table 9.8.

Table 9.8 Distribution losses

(per cent)

Distribution Company	2020-21	2021-22	2022-23	2023-24+
MAHADISCOM	15.29	14.74	14.56	15.33
BEST	4.82	4.63	4.18	4.09
Adani Electricity Mumbai Ltd.	7.81	6.52	5.93	5.46
Tata Power Co. Ltd.	1.98	1.31	1.13	1.41

Source: MAHADISCOM, BEST, Adani Electricity Mumbai Ltd., Tata Power Co. Ltd. + upto December

9.9 **Capacity addition of thermal power:** MAHAGENCO has accorded approval for installation and commissioning of projects for capacity addition at various thermal power stations. Capacity addition of 660 MW project at Bhusawal thermal power station is in progress, expected to be completed by August, 2024. Process of acquiring statutory clearances is in progress for Koradi thermal power station project having capacity of 1,320 MW.

9.10 **Revamped Distribution Sector Scheme (Reforms Based and Result Linked):** GoI has launched Revamped Distribution Sector Scheme (RDSS) in 2021 to minimise the Aggregate Technical & Commercial (AT & C) losses and Average Cost of Supply-Average Revenue Realised (ACS-ARR) gap. Under the scheme, 60 per cent of the project cost will be provided to distribution companies for upgradation of the distribution infrastructure, prepaid smart metering and other supporting activities by March, 2026. The scheme is being implemented through MAHADISCOM and BEST in the State. Under the scheme, smart metering of 2.25 crore non-agricultural consumers, 4.07 lakh non-agricultural distribution transformers and 27,826 feeders through MAHADISCOM is proposed by March, 2025.

Regulatory measures and electricity tariffs

9.11 The Electricity Act, 2003 has mandated the Maharashtra Electricity Regulatory Commission (MERC) to take measures to rationalise the electricity tariff under electricity price regulation, economic management and reforms of the power sector. MERC has notified 'Multi Year Tariff Regulation, 2019' for the period from April, 2020 to March, 2025 for determining the category wise tariffs for distribution companies for each year. Average tariffs of electricity during 2023-24 are given in Table 9.9.

Table 9.9 Average tariffs of electricity during 2023-24

(₹ per unit)

Category of user	MAHADISCOM	BEST	Adani Electricity	Tata Power
LT - Domestic/Residential				
BPL	2.72	3.46	@	@
0-100 Units	6.72	4.12	5.98	3.67
101-300 Units	11.81	7.77	8.06	6.83
301-500 Units	15.85	10.95	10.16	10.54
Above 500 Units	17.10	12.74	11.05	11.33
LT - Commercial/Non-residential				
0-20 kW load	11.62	9.97	9.24	8.89
> 20 kW & <= 50 kW load	16.01	11.40	10.00	11.20
Above 50 kW load	17.97	11.46	10.10	10.62
LT - Industry				
0-20 kW load	7.69	8.33	8.28	8.01
Above 20 kW load	10.27	10.87	9.37	9.55
LT - Agriculture				
Un-metered – Pumpsets	5.57	@	@	@
Metered – Pumpsets	4.65	@	@	@
Metered – Others	8.00	@	@	@
LT - Street lights (Public lighting)				
Grampanchayat and A, B & C class Municipal Councils	8.61	@	@	@
Municipal Corporation areas	10.36	#	#	#
LT - Public services				
Government educational institutions & hospitals	9.27	8.60	8.58	8.58
Others	10.20	8.76	8.87	8.86
HT - Commercial	15.03	10.45	9.39	10.81
HT - Industry	9.70	9.16	8.98	9.17
HT - Railways / Metro / Monorail	9.65	10.78	@	9.93
HT - Public services				
Government educational institutions & hospitals	11.45	9.06	8.94	10.47
Others	12.33	9.77	9.23	8.21
HT - Agriculture pumps	5.96	@	@	@
HT - Agriculture other	8.17	@	@	@

@ Average tarrif not shown as no consumer or lower number of consumers # LT Street lights is included in others of LT Public services

Source: MERC

Renewable energy

9.12 Being one of the urbanised, populated and industrialized State, demands for energy is ever increasing in the State. To increase share of renewable energy substantially by 2030, it has become necessary to use renewable energy sources as an alternative to existing conventional sources for electricity generation. Wind, solar, hydro, biomass, biogas, sea waves, geo-thermal, etc. are clean and eco-friendly renewable energy sources. Government is implementing various schemes and policies for electricity generation through renewable energy sources. Maharashtra Energy Development Agency (MEDA) is the designated agency to co-ordinate, regulate and enforce the provisions of the Energy Conservation Act, 2001.

9.12.1 The State ranks fifth in India after Gujarat, Rajasthan, Tamil Nadu and Karnataka in terms of installed capacity of renewable energy. Potential and installed capacity of renewable energy in the State is given in Table 9.10.

Table 9.10 Potential and installed capacity of renewable energy in the State

(MW)

Source	Potential capacity	Installed capacity As on 31st March			
		2021	2022	2023	2024
Wind	98,210	4,998	5,011	5,011	5,209
Bagasse co-generation	3,685	2,301	2,339	2,407	2,582
Solar	64,320	1,917	2,522	3,429	3,836
Small Hydro Projects (SHP)#	786	370	370	370	370
Biomass	781	215	215	215	215
Industrial waste	350	42	42	42	42
Urban solid waste	287	3	3	3	17
Total	**1,68,419**	**9,846**	**10,502**	**11,476**	**12,271**

Source: MEDA # projects (less than 25 MW capacity) installed by Irrigation Department, GoM

9.13 **Renewable Purchase Obligation & Renewable Energy Certificates Mechanism:** Renewable Purchase Obligation (RPO) is the obligation mandated by MERC to purchase specified minimum percentage of renewable energy out of the total consumption by the obligated entity (the distribution companies, grid connected captive generating plants and open access consumers).

9.13.1 Renewable Energy Certificate (REC) is a market based instrument to promote renewable energy and to address the mismatch between available renewable energy sources and the requirement of the obligated entities to meet their RPO. MEDA is the State agency for RPO, its compliance and implementation of REC framework. As per 'RPO-REC Regulation-2019' of MERC, obligated entity had to purchase minimum 10.5 per cent solar & 11.5 per cent other renewable energy during 2023-24 out of the total conventional consumption by them. RPO achievements are given in Table 9.11.

Table 9.11 RPO achievements

(per cent) (provisional)

Distribution Company	Solar Energy			Other Renewable Energy		
	2021-22	2022-23	2023-24#	2021-22	2022-23	2023-24#
RPO	**6.0**	**8.0**	**10.5**	**11.5**	**11.5**	**11.5**
MAHADISCOM	5.3	7.2	7.3	9.0	8.6	6.6
BEST	6.0	1.8	1.0	14.6	0.1	0.0
Adani Electricity Mumbai Ltd.	5.3	14.1	16.9	3.2	11.5	13.3
Tata Power Co. Ltd.	8.8	17.3	16.9	7.9	7.5	12.8

Source: MEDA # upto December

Policies regarding renewable energy

Unconventional Energy Generation Policy, 2020

9.14.1 The State has adopted a policy for electricity generation from new and renewable energy sources, for transmission-linked projects and for non-transmission projects. The period of the policy is 31st December, 2020 to 31st March, 2027. Under the policy, target is to set up an

environmental friendly electricity generation project with a capacity of 17,385 MW. Salient features of the projects are as follows;

- **Transmission linked projects:** Deployment of electricity generation projects from solar energy of capacity 12,930 MW, wind power projects of capacity 2,500 MW, bagasse based co-generation projects of capacity 1,350 MW, small hydro generation projects of capacity 380 MW, urban solid waste based power generation projects of capacity 200 MW and electricity generation projects based on advanced technology of capacity 25 MW
- **Non-Transmission projects:** Installation of five lakh solar agriculture pumps, establishment of 10,000 solar pumps for water supply, roof top and on ground nontransmission/ hybrid solar power set of capacity 260 MW, electrification of 50,000 houses, decentralised micro grid project for 100 villages, solar hot water system & solar cooking on two lakh sq m area and 4,000 solar based cold storages.

Agriculture pump power connection policy, 2020

9.14.2 GoM has declared 'Agriculture pump power connection policy, 2020' for providing connections to paid pending agriculture pumps to those who have paid connection charges after 1st April, 2018. The policy mainly includes connecting electricity to agricultural pumps through conventional and solar energy, minimising distribution loss and installation of capacitor for efficient use of available distribution system. Under this policy, connections to agriculture pumps are being released through HVDS, solar energy and LT distribution system. Under this policy, total 3.08 lakh agricultural pump connections were released upto November, 2023.

Maharashtra Green Hydrogen Policy, 2023

9.14.3 The Green Hydrogen Policy aims to create a production capacity of at least 500 kilo tonnes of green hydrogen per year in the State by 2030 and make the State a leader in green hydrogen and its related products, promote decarbonisation in industries, increase energy security and promote exports in the green hydrogen sector. Salient features of the policy are as follows :

- To accelerate the development and use of green hydrogen and its by-products as raw material sources and alternative fuels for decarbonisation in energy intensive industrial sectors and heavy industries
- To ensure energy security and promoting clean energy generation by making best use of available renewable energy resources instead of fossil fuels.
- To prepare the export of equipment related to green hydrogen production as well as green fuel
- To promote production of electrolysers in the State
- To encourage investment in green hydrogen and renewable energy sector and to develop the economy of the State by creating employment in the sector
- To make the State a leader by supporting research and development in the field of electrolysers, fuel cells and similar fields required for green hydrogen ecosystem
- To encourage the development of pilot projects for use of green hydrogen and its derivatives in the State
- To create employment opportunities in the State by creating skilled manpower in the value chain of green hydrogen and its derivatives
- To promote development of inclusive and sustainable green hydrogen ecosystem in the State

Schemes for energisation in agricultural sector

9.15 In all 48.69 lakh agricultural pumps were energised in the State upto 31st March, 2024. During 2023-24, in all 1,12,942 agriculture pumps were energised.

9.15.1 ***Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM):*** GoI has launched the scheme in July, 2019 for farmers for installation of solar pumps and grid connected solar & other renewable power plants in the country. Under the scheme, two lakh solar pumps have been sanctioned for the State, of which 83,937 solar pumps were installed upto March, 2024.

9.15.2 ***Mukhyamantri Saur Krishi Vahini Yojana*****:** This scheme aims to provide electricity to farmers during day time by installing solar projects in decentralised manner at or nearby MAHADISCOM's sub-station. During 2023-24 upto December, projects with capacity 548 MW were commissioned. GoM has launched *Mukhyamantri Saur Krishi Vahini Yojana* 2.0 to make the '*Mukhyamantri Sour Krushi Vahini Yojana*' more efficient and streamlined, solarise at least 30 percent of agriculture channel in the State by 2025 and create at least 7,000 MW of solar power capacity to provide uninterrupted and sustainable electricity supply to farmers during the day.

9.15.3 **High Voltage Distribution System Scheme:** GoM is implementing High Voltage Distribution System **(**HVDS) scheme for providing connections to agriculture pumps in the State. In all 1,38,830 connections to agriculture pumps have been provided upto March, 2024.

Domestic electrification schemes

9.16.1 ***Atal*** **Mission for Rejuvenation and Urban Transformation** (***Amrut Abhiyan)*****:** Solar power projects for water supply and sewage treatment plants are being implemented under *Amrut Abhiyan*. Solar power projects of total capacity of 18.4 MW in 12 municipal corporations/councils have been sanctioned under *Amrut Abhiyan* of which, solar power projects of capacity 15.8 MW have been installed at 34 sites and total of 14.8 MW capacity of solar power project has been commissioned upto March, 2024.

9.16.2 **Rooftop Solar Programme:** GoI has launched the programme in 2016 for installation of rooftop solar (RTS) system by consumers in all sectors. Phase-II of the programme is launched in 2019 for residential consumers for installation of RTS system. Under Phase-II, 40 per cent subsidy is being provided for the RTS system upto capacity three KW and 20 per cent subsidy for RTS system capacity between three KW to 10 KW. Upto March, 2024, installed capacity of RTS system in area of MAHADISCOM was 2,028 MW.

9.16.3 **Rural Electrification Programme:** This programme is being implemented in the State in accordance with the 'Unconventional Energy Generation Policy, 2020'. Households in remote villages which are not electrified through conventional energy sources by government and areas such as villages/ wadi/ padas where MAHADISCOM is unable to electrify the house in next five years are being electrified under Rural Electrification Programme. Under this programme, target has been set to electrify 10,000 households through solar power every year of which, total 7,977 solar lights have been installed till March, 2024.

9.16.4 **Various measures for renewable energy:** The information of various measures for renewable energy are given in Table 9.12.

Table 9.12 Information of various measures for renewable energy

Particulars	Upto 31st March, 2024 (no.)	Estimated energy saving potential (MU)	Estimated CO_2 reduction per year (MT)
Measures of renewable energy			
a) Energy audit	2,184	88.83	NA
b) Walk through energy audit	4,031	8.50	NA
c) Demo projects of energy conservation in government/semi-government office buildings	121	13.67	11,201.33
d) Installation of energy conservation devices in municipal corporations/councils	40	2.43	1,992.60
Schemes under Bureau of energy efficiency			
a) Model energy efficient village campaign	31	1.20	984.17
b) Implementation of energy efficient activities in government schools	431	2.20	1,802.34
c) Demo projects in government/semi-government hospitals	41	0.32	273.34
d) Demo projects in municipal councils	22	0.90	741.82
e) Energy clubs	533	NA	NA
Wind monitoring stations	414	NA	NA
Solar power plants in government buildings	525	NA	NA
Briquetting projects	203	NA	NA
Exhibitions	347	NA	NA

Source : MEDA NA Not Applicable

Other forms of energy

Petroleum and Natural Gas

9.17 Mahanagar Gas Ltd., Maharashtra Natural Gas Ltd. and Gas Authority of India Ltd. (GAIL) are the operating entities of Piped Natural Gas (PNG) connections and Compressed Natural Gas (CNG) stations in the State. Information of PNG connections and CNG stations is given in Table 9.13.

Table 9.13 Information of PNG connections and CNG stations

Particulars	2020-21		2021-22		2022-23	
	Maharashtra	India	Maharashtra	India	Maharashtra	India
CNG Stations (number)	456	3,095	571	4,433	741	5,666
CNG Sales (‘000 MT)	503.8	2,589.1	811.7	3,968.0	1,022.3	5,102.7
PNG Connections (‘000)	1,973.9	7,864.5	2,332.6	9,350.7	2,846.1	11,083.6
Domestic	1,969.0	7,820.4	2,327.4	9,302.6	2,840.6	11,029.2
Industrial	0.4	11.8	0.5	13.2	0.9	16.6
Commercial	4.5	32.3	4.7	34.9	4.7	37.8

Source: Ministry of Petroleum and Natural Gas, GoI

Consumption of Petroleum products

9.18 The State ranks second (9.4 per cent) in consumption of petroleum products in India, after Gujarat (11.5 per cent). Consumption of major petroleum products are given in Table 9.14.

Table 9.14 Consumption of major petroleum products

('000 MT)

Petroleum products	2021-22		2022-23*	
	Maharashtra	India	Maharashtra	India
Naphtha	279	13,246	334	12,158
Liquefied Petroleum Gas (LPG)	3,307	28,253	3,364	28,504
Motor Spirit/Gasoline (MS)	3,388	30,849	3,815	34,967
Superior Kerosene Oil (SKO)	15	1,493	6	490
Aviation Turbine Fuel (ATF)	699	5,008	1,117	7,366
High Speed Diesel (HSD)	8,322	76,659	9,291	85,898
Light Diesel Oil (LDO)	213	1,018	107	725
Furnace Oil (FO)	717	5,815	667	6,181
Hot Heavy Stock (HHS)/ Low Sulphur Heavy Stock (LSHS)	48	447	154	773
Lubricants/Grease	381	4,540	452	3,740
Bitumen	561	7,816	586	8,041
Others	1,121	26,553	1,058	34,167
Total	**19,051**	**2,01,697**	**20,951**	**2,23,009**

Source: Ministry of Petroleum and Natural Gas, GoI

* Provisional

9.18.1 Superior Kerosene Oil (SKO) / Light Diesel Oil (LDO) dealers and SKO/ LDO retail outlets are given in Table 9.15.

Table 9.15 SKO/LDO dealers and SKO/LDO retail outlets

Particulars	2020-21		2021-22		2022-23	
	Maharashtra	India	Maharashtra	India	Maharashtra	India
SKO/LDO Dealers (number)	752	6,439	786	6,414	786	6,414
SKO/ LDO Retail Outlets (number)	7,048	77,104	7,667	83,027	8,045	86,855
PDS SKO allocation ('000 MT)	47	2,315	28	1,783	17	1,244
PDS SKO upliftment of allocation ('000 MT)	22	2,039	16	1,660	4	3,961

Source: Ministry of Petroleum and Natural Gas, GoI

9.18.2 Details of Liquefied Petroleum Gas (LPG) consumers and distributors are given in Table 9.16.

Table 9.16 Details of LPG consumers and distributors

Particulars	2020-21		2021-22		2022-23	
	Maharashtra	India	Maharashtra	India	Maharashtra	India
LPG Active Domestic Consumers (lakh)	288	2,895	299	3,053	304	3,140
LPG Distributors (no.)	2,206	25,083	2,219	25,269	2,231	25,386
Auto LPG Dispensing stations (no.)	65	651	83	716	59	640
Bottling Plants (no.)	20	200	20	199	22	208
Bottling capacity (Thousand Metric Tonne per annum)	2,370	21,249	2,370	21,573	2,610	22,225
PMUY Beneficiaries (lakh)	44	800	47	899	49	959

Source: Ministry of Petroleum and Natural Gas, GoI

9.19 ***Pradhan Mantri Ujjwala Yojana (PMUY)*:** GoI has launched this scheme for providing LPG connections to five crore women belonging to BPL families over a period of three years starting from 2016-17. As on 31st March, 2024 in all 52.1 lakh LPG connections have been provided in the State out of which 44.1 lakh LPG connections have been provided under this scheme. GoI has launched *Ujjwala* 2.0 on 10th August, 2021. The scheme aims to provide deposit-free LPG connections to low-income families who could not be covered under the earlier phase of PMUY. Under *Ujjwala* 2.0, along with a deposit free LPG connection, first refill and hotplate is provided free of cost to the beneficiaries. Under *Ujjwala* 2.0, as on 31st March, 2024 in all about eight lakh LPG connections have been provided in the State.

TRANSPORT AND COMMUNICATION

9.20 A well-developed transport and communication system helps to achieve socio-economic development. Roadways, railways, airways and waterways are the modes of transport while postal services, telephones, cellphones and internet services are major modes of communication. Innovation & technical advancement has enhanced services in the field of transport and communication.

Surface transport

Road network

9.21 The road network consists of highways, district roads, village roads and internal city roads. The total road length maintained by National Highway Authority of India (NHAI), Public Works Department (PWD) and Zilla Parishad (ZP) (excluding road length maintained by other agencies) at the end of March, 2023 was 3.25 lakh km as against target of 3.37 lakh km set under Road Development Plan 2001-2021. Road length by type of roads in the State maintained by NHAI, PWD and ZP is given in Table 9.17 and its time series is given in Annexure 9.2. Classification of Districtwise road length according to breadth is given in Annexure 9.3.

Graph 9.6 : Achievement of road development plan (2001-2021)

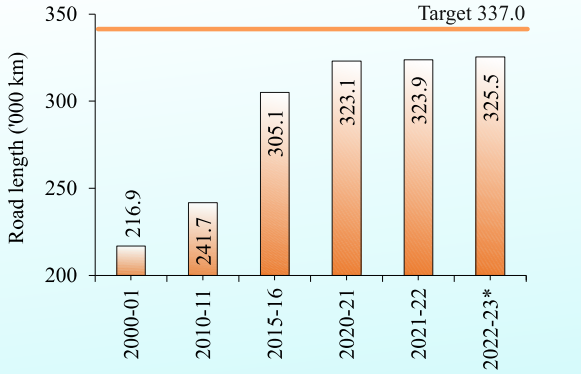


Table 9.17 Road length by type of roads in the State (maintained by NHAI, PWD and ZP)

(As on 31st March)

Year	Road length (km)						
	National highways	Major state highways	State highways	Major district roads	Other district roads	Village roads	Total
2019-20	17,726	2,967	29,030	63,886	47,398	1,48,335	3,09,342
2020-21	18,089	2,900	29,388	68,350	46,408	1,57,980	3,23,115
2021-22	18,366	2,622	29,265	68,535	45,371	1,59,714	3,23,873
2022-23*	18,366	2,716	30,465	71,574	43,229	1,59,139	3,25,489

Note: Figures may not add up due to rounding * Provisional

Source: Public Works Department, GoM

Central Road Fund Scheme

9.22 GoI is implementing Central Road Fund (CRF) scheme since 2001-02 for the development & maintenance of national highways, state roads (roads of interstate connectivity & economic importance), rural roads and construction of roads either under or over the railways by means of a bridge & erect suitable safety works at unmanned rail-road level crossings. A total of 1,561 works are sanctioned under CRF scheme in the State and upto March, 2024 about 71 per cent work is completed.

Pradhan Mantri Gram Sadak Yojana

9.23 The objective of *Pradhan Mantri Gram Sadak Yojana* (PMGSY), launched by GoI in 2000, was to provide all-weather road connectivity to the unconnected habitations in the rural areas with a population of 500 & above (250 & above for tribal areas). The objective of PMGSY-II, started in 2013 was to upgrade existing selected rural roads based on their economic potential and their role in facilitating the growth of rural market centres. The objective of PMGSY- III, started in 2019 is to upgrade roads connecting secondary schools, health centres and market committee centres. Number of connected habitations under PMGSY upto March, 2024 was 1,821. Road length constructed and upgraded under PMGSY is given in Table 9.18.

Table 9.18 Road length constructed and upgraded under PMGSY

(Upto March, 2024)

PMGSY	Road length sanctioned (km)	Road length completed (km)
I	24,215.19	24,150.39
II	2,585.91	2,585.91
III	5,734.68	2,255.16
Total	**32,535.78**	**28,991.46**

Source: Rural Development Department, GoM

Mukhya Mantri Gram Sadak Yojana

9.24 *Mukhya Mantri Gram Sadak Yojana* is being implemented in the State since 2015-16 for connecting unconnected habitations and upgrading existing rural roads which are not covered under *Pradhan Mantri Gram Sadak Yojana*. Since inception upto March, 2024, in all 30,922 km road length was sanctioned of which 28,500 km (about 92 per cent) road length was completed and expenditure incurred was ₹ 19,718 crore. *Mukhya Mantri Gram Sadak Yojana* phase-2 is being implemented in the State since 2021-22 for upgradation of 10,000 km other district roads and rural roads. Since inception of phase-2 upto March, 2024, in all 9,899.35 km road length is sanctioned, of which 250.20 km road length is completed and expenditure incurred is ₹ 414.58 crore.

Bharatmala Pariyojana

9.25 *Bharatmala Pariyojana* is an ambitious infrastructure programme being implemented by GoI from 2015. The programme aims at optimising the efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through development of Economic Corridors, Inter-State Corridors, Feeder Routes, National Corridor, Border & International connectivity roads, Coastal & Port connectivity roads and Green Field Expressways. Under this programme 32 projects, worth ₹ 29,468 crore, are under implementation in the State. *Sant Tukaram Palkhi Marg , Sant Dnyaneshwar Palkhi Marg,* Vadodara-Mumbai Expressway are included in this programme.

Projects of Maharashtra State Road Development Corporation

9.26 Maharashtra State Road Development Corporation (MSRDC) is established for development of roads & allied infrastructure in the State mainly through private participation. Most of the project undertaken by MSRDC are on Build, Operate and Transfer (BOT) basis and MSRDC deals with road projects, flyover projects, toll collection rights, etc. Status of selected ongoing projects of MSRDC are given in Table 9.19.

Table 9.19 Status of selected ongoing projects of MSRDC

(As on 31st March, 2024)

Name of project	Estimated project cost (₹ Crore)	Expenditure incurred (₹ Crore)	Expected year of completion
Versova- Bandra Sea link project	11,332.82	2,813.08	2028-29
Mumbai - Pune Expressway Augmentation	6,695.37	6,043.49	2024-25
Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg	55,335.32	60,588.11	July, 2024
Pune ring road	36,858.50	3,184.55	2026-27
Thane- Ghodbunder elevated road	3,000.00	-	handed over to MMRDA
Thane creek bridge – Phase III	775.58	563.76	2024-25
Virar - Alibaug Multimodal transport lane	57,085.72	655.24	2026-27
Revas - Reddy Coastal Road	9,572.75	31.93	2026-27
Kokan Greenfield Expressway	71,298.00	16.01	2028-29
Jalna - Nanded Expressway	20,818.44	74.95	2026-27

Source: Maharashtra State Road Development Corporation

Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg

9.26.1 *Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg* is an eight lane expressway (701 km long and 120 m wide) connecting Mumbai to Nagpur which passes through 10 districts, 26 talukas and 392 villages thereby connecting 24 districts. Development of 24 *Krushi Samruddhi Kendra* is proposed at the crossing points of state and national highways. This corridor connects industrial places (Butibori, Wardha, Amravati, Jalna, Chikalthana, Shendra, Waluj and Sinnar), tourist & pilgrimage places (Sewagram, Karanja (Lad), Lonar, Sindkhedraja, Ellora and Shirdi). Upto March, 2024 about 98 per cent of work is completed and expenditure incurred is ₹ 60,588 crore. Nagpur to Shirdi road length about 520 km of the said project is opened to traffic from December, 2022. In second phase of the project Shirdi to Bharveer (Taluka Igatpuri) road length about 80 km is opened to traffic from May, 2023. Remaining Bharveer to Amne (Taluka - Bhivandi) road length about 101 km will be expected by July, 2024.

Projects of Mumbai Metropolitan Region Development Authority

9.27 Mumbai Metropolitan Region (MMR) comprises of entire area of Mumbai City, Mumbai Suburban and parts of Thane, Raigad & Palghar districts. MMR covers 6,328 sq km area under nine Municipal Corporations, nine Municipal Councils, one Nagar Panchayat, 44 Census Towns & about 1,425 villages. Mumbai Metropolitan Region Development Authority (MMRDA) has undertaken various infrastructure projects in MMR. Status of on-going transport projects by MMRDA is given in Table 9.20.

Table 9.20 Status of on-going transport projects by MMRDA

(As on 31st March, 2024) (₹ Crore)

Name of project	Commence-ment year	Cost of project	Expenditure incurred	Expected year of completion	Current status
EXTENDED MUIP:					
Phase - I, II & III: Roads, Flyovers	2007	9,568.87$	7,276.79	-	Work in progress
Outer Area Road Development Scheme	2014	1,730.00	1,101.00	2024	Work in progress
Santacruz – Chembur Link Road (SCLR) Kurla to Vakola Phase I	2016	669.53	704.00	2024	92 per cent work completed
Bharat Diamond Bourse to Vakola Junction Phase II (under extension of SCLR)	2017	196.00	166.41	2024	95 per cent work completed
Atal Bihari Vajapayee Sewri Nhava Sheva Atal Setu (Mumbai Trans – Harbour link) (22 km)	2018	17,843.00	18,599.29	2023	opened to traffic from January, 2024
Constructions of Flyover at Kalanagar Junction, Bandra (East) Mumbai	2017	103.73	101.15	2024	The project consists of three arms (B, C and D). Arm B and C opened for traffic and arm D is completed
Traffic improvement of Chheda Nagar Junction Ghatkopar (East) on Eastern Express Highway	2018	223.85	236.85	2024	90 per cent work completed
Construction of 6 Lane Tunnel from Tikujiniwadi in Thane City to Sanjay Gandhi National Park, Borivali	2023	16,600.40	2,004.61	2028	work in progress
Sewri – Worli elevated connector project	2021	1,051.86	1,143.59	2026	57 per cent work completed
Versova -Virar Sea link project	2021	63,426.00	10.43	2030	work in progress

MUIP Mumbai Urban Authority Infrastructure Project $ Cost of projects includes other work

Source: Mumbai Metropolitan Region Development Authority

Mumbai Coastal Road Project (South)

9.28 The Mumbai Coastal Road Project of eight lanes of length 10.58 km from Princess Street flyover to Worli end of Bandra Worli Sea Link with three interchanges is undertaken by Municipal Corporation of Greater Mumbai. This project includes twin tunnel each of length 3.45 km equipped with latest technology. About 70 ha reclaimed area is reserved for green belt & recreational facilities. The project also includes public transport facilities by virtue of dedicated lane for Bus Rapid Transit System (BRTS) with BRTS depot and four underground parking areas with a total capacity of about 1,800 cars. The total estimated cost of the project is ₹ 13,983.84 crore. Upto March, 2024 about 87 per cent work is completed and expenditure incurred therein is ₹ 10,453.48 crore. The southbound traffic lane from Bindu Madhav Thackeray chowk to Marine Drive of this project is opened to traffic from March, 2024.

Public passenger road transport facility

Maharashtra State Road Transport Corporation

9.29 Maharashtra State Road Transport Corporation (MSRTC) provides passenger services to commuters within the State as well as to adjoining states through depots and bus stations located at talukas & important traffic centres. Percentage of villages covered and population served by MSRTC bus service is given in Table 9.21. The transport statistics of MSRTC is given in Table 9.22.

Table 9.21 Percentage of villages covered and population served by MSRTC bus service

Access to bus service	Percentage of villages covered		Percentage of population served	
	2021-22	2022-23	2021-22	2022-23
Direct	76.9	77.4	91.1	92.4
Upto 3 km	15.1	14.7	5.7	5.3
Between 3 to 5 km	4.6	4.5	1.7	1.4
Beyond 5 km	3.4	3.4	1.4	1.0

Source: Maharashtra State Road Transport Corporation

Table 9.22 Transport statistics of MSRTC

Item	Unit	2021-22	2022-23	2023-24
Total vehicles in possession	Number	17,193	15,618	15,760
Average no. of buses on road per day	Number	6,688	13,316	14,160
Total employees (as on 31st March)	Number	78,836	89,283	87,639
Average effective km operated per day	Lakh	19.65	45.54	49.54
Average no. of passengers carried per day	Lakh	13.56	43.78	55.51
Vehicle productivity	Km	114.29	291.58	315.20
Crew productivity	Km	211.76	218.21	219.94
Bus Staff ratio (on road vehicles)	-	11.76	6.70	6.24
Average seating capacity	Number	42.54	42.70	42.71
Load factor (excluding value of concessions)	Per cent	50.5	49.4	46.7
Load factor (including value of concessions)	Per cent	61.7	67.7	83.7

Source: Maharashtra State Road Transport Corporation

9.29.1 Apart from regular operations, MSRTC provides special services for fairs and casual contracts. Transport statistics of fairs and casual contracts of MSRTC is given in Table 9.23.

Table 9.23 Transport statistics of fairs & casual contracts of MSRTC

Particulars	Fairs		Casual contracts					
	2022-23	2023-24	2022-23			2023-24		
			Concessional	Non-Concessional	All	Concessional	Non-concessional	All
Effective km (lakh)	172.64	189.49	183.40	62.65	246.05	146.76	134.51	281.27
Income earned (₹ crore)	70.66	90.74	53.15	38.13	91.28	43.35	79.18	122.53

Note: Figures may not add up due to rounding

Source: Maharashtra State Road Transport Corporation

9.29.2 Various types of concessions in bus fares are provided to students, women, senior citizens (above 65 years of age), cancer patients, freedom fighters, etc. by MSRTC and amount of concession is reimbursed by GoM. During 2022-23, concession in bus fare was provided to 22.35 crore passengers by MSRTC and amount of concessions given was ₹ 1,575.42 crore. During 2023-24 concession in bus fare was provided to 93.16 crore passengers by MSRTC and amount of concessions given was ₹ 4,137.62 crore. The number of accidents and compensation paid by MSRTC is given in Table 9.24.

Table 9.24 Number of accidents and compensation paid by MSRTC

Particulars	2021-22	2022-23	2023-24
Accidents (no.)	1,281	3,014	3,381
Persons died (no.)	159	343	421
Persons injured (no.)	1,130	3,584	2,818
Rate of accidents per lakh km	0.18	0.18	0.19
On the spot payment (₹ crore)	0.16	0.81@	1.74@+
Final compensation (₹ crore)	50.42	85.82@	77.49@+

@ Unaudited + upto February

Source: Maharashtra State Road Transport Corporation

9.29.3 ***Mahila Sanman Yojana*:** *Mahila Sanman Yojana* is being implemented by GoM since March, 2023 for women passengers travelling by buses of MSRTC within the State. Under this scheme 50 per cent concession in bus fare (excluding city transport) is given to women passengers. Since inception upto March, 2024, under this scheme MSRTC received reimbursement amount of ₹ 1,698.84 crore.

9.29.4 **Freight transport by MSRTC:** MSRTC has commenced goods transport service from May, 2020 and made available 1,130 buses for goods transportation. During 2022-23, about 17.23 Lakh MT and during 2023-24, about 19.08 Lakh MT goods were transported by MSRTC.

City public passenger road transport

9.30 The public passenger road transport is one of the major modes of passenger transport in cities. MSRTC provides local passenger transport facility in Ratnagiri and Sangli-Miraj, *Brihanmumbai* Electricity Supply & Transport (BEST) in *Brihanmumbai, Pune Mahanagar Parivahan Mahamandal* Ltd (PMPML) in Pune Municipal Corporation & Pimpri-Chinchwad Municipal Corporation areas and in remaining 14 cities respective Municipal Corporations/ Councils provide transport facilities. City public passenger road transport statistics is given in Table 9.25.

Table 9.25 City public passenger road transport statistics

(As on 31st March)

Transport service provider	Average no. of vehicles on road per day		Average no. of passengers carried per day (Lakh)		Average effective km operated per day (Lakh)	
	2022	2023	2022	2023	2022	2023
MSRTC (City operations)	113	76	0.11	0.26	0.05	0.12
BEST	3,142	3,257	21.19	29.17	5.35	5.14
Pune *Mahanagar Parivahan Mahamandal* Limited	1,067	1,603	5.57	11.20	2.45	3.51
Navi Mumbai Municipal Transport	296	362	1.34	2.08	0.66	0.81
Nagpur Municipal Transport	228	324	0.67	1.14	0.45	0.63
Thane Municipal Transport	227	267	1.68	2.42	0.42	0.44
Vasai-Virar Municipal Transport	65	92	0.33	0.46	0.11	0.14
Kolhapur Municipal Transport	45	64	0.23	0.48	0.08	0.15
Solapur Municipal Transport	12	15	0.02	0.02	0.02	0.01
Kalyan-Dombivli Municipal Transport	42	58	0.11	0.36	0.04	0.10
Mira-Bhayander Municipal Transport	52	67	0.38	0.70	0.11	0.15
Amravati Municipal Transport	25	17	0.20	0.18	0.08	0.02
Akola Municipal Transport@	-	-	-	-	-	-
Khopoli Municipal Transport	3	4	0.02	0.02	0.01	Neg
Latur Municipal Transport	13	18	0.01	0.15	0.02	0.03
Ahmednagar Municipal Transport	15	15	0.06	0.08	0.03	0.03
Nashik Municipal Transport	104	240	0.32	0.75	0.22	0.53

@ Akola transport services temporarily stopped Neg- Negligible

Source: Maharashtra State Road Transport Corporation, *Brihanmumbai* Electricity Supply & Transport, Pune *Mahanagar Parivahan Mahamandal* Limited & respective Municipal Corporations/ Council

Motor vehicles

9.31 The total number of motor vehicles on road in the State as on 1st January, 2024 is 4.58 crore showing an increase of about 5.8 per cent over the previous year. Of the total registered vehicles in the State, about 10.3 per cent vehicles were registered in *Brihanmumbai*. Total number of Battery Electric Vehicles (BEVs) registered in the State upto December, 2023 was 3,94,337. The number of vehicles per km road length (roads maintained by NHAI, PWD and ZP) in the State was 141 as on 1st January, 2024. Number of motor vehicles in the State is given in Table 9.26 and its time series is given in Annexure 9.4.

Graph 9.7 : Registered Electric Vehicles

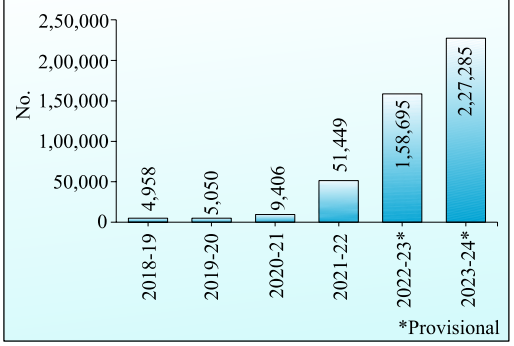


Table 9.26 Number of motor vehicles in the State

('000)

Category of vehicles	As on 1st January					
	Maharashtra			*Brihanmumbai*		
	2023*	2024*	Per cent change	2023*	2024*	Per cent change
Two wheelers (motorcycles, scooters & mopeds)	31,590	33,324	5.5	2,653.29	2,800.36	5.5
Auto rickshaws	1,103.97	1,163.02	5.3	234.55	241.56	3.0
LMV (cars, jeeps, station wagons & taxis)	6,632.37	7,100.71	7.1	1,442.38	1,525.58	5.8
Buses (stage carriages, contract carriages, school buses & PSV)	162.33	174.31	7.4	20.71	22.66	9.4
Goods vehicles [articulated/multiaxial vehicles, trucks & lorries, tankers, delivery vans (3 & 4 wheelers), etc.]	2,131.63	2,265.20	6.3	116.27	128.71	10.7
Tractors	1,079.77	1,161.21	7.5	0.25	0.42	68.0
Trailers	470.51	483.84	2.8	0.17	0.33	94.1
Ambulances	21.33	22.51	5.5	2.06	2.25	9.2
Others	106.73	119.80	12.2	6.08	7.55	24.2
Total	**43,298.54**	**45,814.12**	**5.8**	**4,475.76**	**4,729.42**	**5.7**

PSV - Public Service Vehicles LMV - Light Motor Vehicles * Provisional

Note: Figures may not add up due to rounding

Source: Office of the Transport Commissioner, GoM

9.31.1 The driving licenses and registration certificates are issued online in the form of smart card through *SARATHI* & *VAHAN* application respectively. The number of valid motor driving licenses in the State at the end of March, 2024 was 419.06 lakh, showing an increase of 2.7 per cent over the previous year. The number of learning licenses issued in the State during 2023-24 was 34.26 lakh.

Road Safety

9.32 The number of accidents per ten thousand vehicles was eight in the State during 2023. Plays and lectures based on theme of road safety are organised every year in the State for public awareness. Road accident statistics is given in Table 9.27.

Graph 9.8 : No. of accidents per thousand vehicle

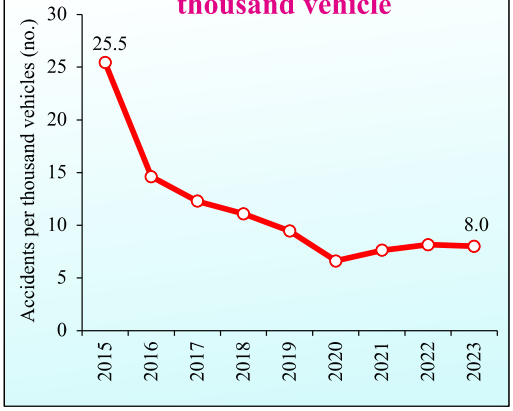


Table 9.27 Road accident statistics

(no.)

Year	Accidents		Persons died		Persons injured	
	State	*Brihanmumbai*	State	*Brihanmumbai*	State	*Brihanmumbai*
2021	29,477	2,214	13,528	387	23,071	1,944
2022	33,383	1,895	15,224	371	27,239	1,671
2023	35,243	2,533	15,336	384	29,764	2,617

Sourc : Office of the Additional Director General (Traffic), Home Department, GoM

Railway

9.33 Railway is the major public transport system. Passenger transport and freight transport are the two major segments of the railways. The railway route length including Konkan railway in the State as on 31st March, 2023 was 6,239.51 km, which is 9.1 per cent of the total railway route length (68,584.18 km) of India. The status of on-going works of central railway in the State is given in Table 9.28.

Table 9.28 Status of on-going central railway works

(As on 31st March, 2024)

Name of the route	Route length (km)	Total project cost (₹ Crore)	Physical progress (per cent)
Pune-Miraj-Londha (doubling)	280#	4,872.53	84
Wardha-Nanded via Yavatmal-Pusad (New line)	270	3,445.48	47
Itarsi-Nagpur 3rd line	279	2,449.91	40
Ahmednagar-Narayandoh -Beed-Parli Vaijnath (New line)	261	4,805.17	83
Daund-Manmad (doubling)	248	2,081.27	86
Manmad- Jalgaon 3rd line	160	1,035.16	75
Wardha-Ballarshah 3rd line	132	1,384.72	67
Wardha-Nagpur 3rd line	76	540.02	72
Wardha-Nagpur 4th line	79	637.95	70
Kalyan-Kasara 3rd line	67	792.89	50
Baramati-Lonand via Phaltan	64	736.44	50$
Belapur-Seawood-Uran (New line)	54	2,973.35	100$$
Dhule (Borvihir)-Dhule -Nardana	51	492.76	5
Jalgaon-Bhusawal 4th line (doubling)	24	261.37	100$$
Solapur-Tuljapur-Osmanabad	84	904.92	5
Indore-Manmad via Malegaon	368	16,324.53	DPR work in process
Pune-Nashik	265	2,425.00	DPR prepared

Excluding South Western Railway route DPR Detailed Project Report $ Phalatan to Lonand route commissioned
$$ Route commissioned
Source: Central Railway

9.33.1 During 2021-22 & 2022-23 cargo traffic handled by central railway was 708.89 lakh MT and 760.53 lakh MT respectively.

Mumbai Suburban Railway

9.34 Mumbai Suburban Railway is the major mode of public transport in MMR. Two zonal railways, viz. Western railway (WR) and Central railway (CR) operate Mumbai suburban railway system. The Harbour line and Trans Harbour line are parts of the Central railway. During 2022-23, everyday both suburban railways fleet of 229 local trains (11 AC local trains) were utilised to run 3,081 (135 AC services) train services, carrying on an average 70.1 lakh passengers per day.

9.35 Mumbai Railway Vikas Corporation Ltd. (MRVC) implements rail component of Mumbai Urban Transport Projects (MUTP). The status of on-going projects of MUTP II, III & III A is given in Table 9.29.

Table 9.29 Status of on-going projects of MUTP II, III & III A

(As on 31st March, 2024)

Name of project	Length of corridor (route kilometer)	Estimated cost (₹ Crore)	Expenditure incurred (₹ Crore)	Expected year of completion	Physical Progress (Per cent)
MUTP II					
Mumbai Central - Borivali (additional 6th line)	29.50	918.53	784.11	March, 2027	70
CSMT-Kurla (additional 5th & 6th line)	15.39	1,367.00	531.68	December, 2026	26
MUTP III					
New suburban corridor between Panvel-Karjat	28.00	2,782.00	1,583.82	December, 2025	43
New suburban corridor link between Airoli- Kalwa (elevated)	4.00	476.00	222.15	-	45
Quadrupling of Virar-Dahanu road	63.00	3,578.00	995.52	December, 2026	24
Trespass Control on Mid-section on CR & WR	-	551.00	446.44	December, 2024	75
MUTP III A					
Kalyan-Badlapur (3rd & 4th line)	14.05	1,510.00	337.75	December, 2026	21
Borivali-Virar (5th & 6th line)	26.00	2,184.00	25.03	December, 2027	work in progress
Kalyan -Asangaon (4th line)	32.22	1,759.00	5.71	December, 2025	work in progress
Extension of Harbour Line between Goregaon- Borivali	7.08	825.58	1.00	December, 2027	work in progress

Source: Mumbai Railway Vikas Corporation

CSMT *Chhatrapati Shivaji Maharaj Terminus*

9.36 Apart from announcements about arrivals of local trains and sensitising about safety, various measures viz. construction of foot over bridges, subways, walls to control trespassing on suburban railway tracks, sealing off the trespassing points, shifting of railway poles, etc. have been taken to prevent accidents. Number of accidental deaths and persons injured on Mumbai suburban railway route is given in Table 9.30.

Table 9.30 Number of accidental deaths and persons injured on Mumbai suburban railway route

Cause of accident	2022		2023		2024+	
	Deaths	Injured	Deaths	Injured	Deaths	Injured
Crossing railway Line	1,118	201	1,277	241	286	67
Fall in gap	3	4	10	1	2	2
Fall down from train	700	1,026	590	1,241	139	325
Hitting railway poles	12	31	4	47	2	13
Other$	674	893	709	911	136	226
All	**2,507**	**2,155**	**2,590**	**2,441**	**565**	**633**

$ Includes electric shock, suicide, natural deaths, cases referred for forensic analysis, etc. + upto March

Source: Mumbai Railway Police Commissionerate, GoM

Metro Rail Projects

9.37 Metro Rail Project is designed to reduce traffic congestion on road and alternate to existing public transport in urban region. Metro rail projects are undertaken in Mumbai, Navi Mumbai, Pune & Nagpur cities to have a safe, reliable, efficient, affordable, commuter friendly and environmentally sustainable rapid public transport system.

9.37.1 **Mumbai metro rail project:** Mumbai metro rail, a rapid transit system project, is being implemented on Public Private Partnership (PPP) basis. The status of on-going metro rail projects in MMR is given in Table 9.31

Table 9.31 Status of on-going metro rail projects in MMR

(₹ Crore)

Metro Line /Name of project	Commence-ment year	Cost of project	Expenditure incurred+	Expected year of completion	Status+
2B- D.N. Nagar -Mandale (23.6 km)	2018	10,986.00	4,077.68	December, 2025	65 per cent of civil works completed
3 Colaba-Bandra-SEEPZ (33.5 km)	2016	37,275.82	28,615.78	2024-25	91 per cent civil works completed
4 Wadala-Ghatkopar-Thane-Kasarwadavli (32 km)	2018	14,549.00	2,917.24	December, 2025	67 per cent civil works completed
4A Kasarwadavli – Gaimukh (2.7 km)	2019	949.00	373.17	December, 2025	70 per cent civil works completed
5 Thane-Bhiwandi-Kalyan (23.5 km)	2019	8,417.00	1,153.50	June, 2026	86 per cent civil works completed for Phase-I (Thane-Bhiwandi)
6 Swami Samarth Nagar-Vikhroli (14.5 km)	2018	6,716.00	1,947.94	April, 2026	75 per cent civil works completed
9 Dahisar (E) – Mira Bhayandar and Andheri – CSMIA (13.5 km)	2019	6,607.00	1,742.49	December, 2025	58 per cent Civil works completed
10 Gaimukh-Shivaji chowk (Mira Road)	-	4,476.00	2.81	October, 2026	work in Progress
11 Wadala-CSMT	-	8,739.00	-	-	Project transfer to MMRCL and DPR work in process
12 Kalyan- Taloja	2023	5,865.00	11.42	December, 2027	work in Progress

CSMIA *Chhatrapati Shivaji Maharaj* International Airport DPR Detailed Project Report + upto March, 2024

MMRCL Mumbai Metro Rail Corporation Limited

Source: Mumbai Metropolitan Region Development Authority, Mumbai Metro Rail Corporation Limited

9.37.2 **Navi Mumbai metro rail project:** An elevated Metro Rail line from CBD Belapur to Pendhar (Navi Mumbai Metro line -1) having elevated length of 11.10 km with 11 stations has been developed by CIDCO and commissioned from November, 2023. The expenditure incurred upto March, 2024 is ₹ 3,058.25 crore.

9.37.3 **Nagpur metro rail project:** Nagpur Metro rail project (Phase-I) consists of 38 stations covering length of 40.02 km. This project is divided into two corridors viz. North-South corridor (Khapri to Automotive Sq.- orange line) covering 20.54 km length and East-West corridor (Lokmanya Nagar to Prajapati Nagar – aqua line) covering 19.48 km length. Both these routes are commissioned from December, 2022. During 2023-24 average number of passengers travelled is around 69,769 per day. Nagpur Metro rail project Phase II is sanctioned by GoI in December, 2022 with project cost of ₹ 6,708 crore consisting of an extension of two operational corridors of Phase-I. This project consists of 43.80 km length with 32 stations.

9.37.4 **Pune metro rail project:** Pune Metro Rail Project consists of two corridors. Corridor I-Pimpri Chinchwad to Swargate (Purple line) is of 17.53 km length (11.45 km elevated stretch and 6.08 km underground stretch) with nine elevated and five underground stations. Corridor II-Vanaz to Ramwadi (Aqua line) with length 15.75 km is totally elevated with 16 stations. The total estimated cost of the project is ₹ 13,656 crore. PCMC to Civil court (13.91 km) in corridor I has been commissioned in August, 2023 and Vanaz to Ramwadi (15.75 km) in corridor II has been commissioned in March, 2024. During 2023-24 on an average per day 41,000 passengers were travelled.

Mumbai Ahmedabad High Speed Rail Project

9.38 Mumbai Ahmedabad High Speed Rail project has been sanctioned by GoI in December, 2015 with estimated project cost of ₹ 1.08 lakh crore. Project work in the State is divided into three packages viz I. Construction of underground high speed rail station at Bandra Kurla Complex, II. Construction of about 21 km long tunnel partly passing under sea, III. Construction of 135 km long high speed rail viaduct, bridge and tunnel. Work is in progress for all three packages.

Water transport

9.39 Water transport is cheaper and environment friendly as compared to other transport facilities. Maharashtra Meritime Development Policy, 2023 (MMDP 2023) is being implemented in the State from August, 2023. Industrial development and port development are complimentary to each other hence MMDP 2023 has been aligned with the industrial policy of the State. The main features of the policy are:

- Ports classified as micro, small, medium, large and mega with maximum duration of concession agreement for ports fixed at 90 years
- The concession applicable to new projects as well as existing projects for their expansion work
- Exemption from passenger levy, port dues given to promote passenger water transport and coastal tourism
- Inclusion of Shipyards, Cruise, Shipping, Skill development, asset monetisation, green measures for ports etc.

9.39.1 **Major ports:** Two major ports viz. Mumbai Port and Jawaharlal Nehru Port are located in the State. During 2022-23, Mumbai Port and Jawaharlal Nehru Port handled 636.08 lakh MT and 838.61 lakh MT cargo traffic respectively. Transport statistics of major ports is given in Table 9.32.

Table 9.32 Transport statistics of major ports

Particulars	Mumbai Port		Jawaharlal Nehru Port	
	2021-22	2022-23	2021-22	2022-23
Total cargo capacity (lakh MT)	**838.50**	**838.50**	**1,208.00**	**1,208.00**
Cargo traffic handled (lakh MT)	**598.90**	**636.08**	**759.96**	**838.61**
Of which a) Import	407.02	458.51	405.33	465.32
b) Export	191.88	177.57	354.63	373.29
Passenger traffic handled ('000)	98.34	190.43	NA	NA
Vessels handled (no.)	5,941	7,401	2,837	3,273

Source: Mumbai Port trust & Jawaharlal Nehru Port trust NA- Not Applicable

9.39.2 **Non-major ports:** There are 48 non-major ports in the State with number of captive and multi-purpose jetties set-up within these ports, which also undertake cargo handling. The transport statistics of non-major ports is given in Table 9.33.

Table 9.33 Transport statistics of non-major ports

Particulars	2021-22	2022-23	2023-24
Cargo traffic handled (lakh MT)	**524.73**	**712.56**	**768.71**
Of which a) Import	377.95	518.17	581.42
b) Export	146.78	194.39	187.29
Passenger traffic handled (lakh)	**136.67**	**187.24**	**186.70**
Of which a) By mechanised vessels	136.04	185.47	185.17
b) By non-mechanised vessels	0.63	1.77	1.53
Vehicle traffic handled (lakh)	-	**5.28**	**5.32**

Source: Maharashtra Maritime Board

9.39.3 ***Sagarmala* programme:** This programme aims to promote port-led development. The vision is to reduce logistics cost for export-import and domestic trade with minimal infrastructure investment. Under this programme, projects have been identified across the areas of port modernisation & new port development, port connectivity, port led industrialisation and community development. Under this programme, GoI has sanctioned 27 projects in the State to develop infrastructure facilities at ports with estimated cost of ₹ 974.92 crore. Of which, 11 projects with total cost of ₹ 296.44 crore are completed and 16 projects with estimated cost of ₹ 678.48 crore are under progress.

9.39.4 Roll on – Roll off (ro-ro) services have been started at New *Bhaucha Dhakka* (Mumbai) - Mandwa (Raigad), Agardanda-Dighi in Raigad district and Bhayander (Thane)-Vasai (Palghar). Construction works of ro-ro jetties are in progress at Karanja-Rewas (Raigad), Naringi- Kharvadeshri (Palghar), Marve-Manori (Mumbai suburban), Gorai-Borivali (Mumbai suburban), *Bhaucha Dhakka* (Mumbai)-Kashid (Raigad), *Bhaucha Dhakka* (Mumbai)-Mora (Raigad) waterways. Belapur (Navi Mumbai)-Elephanta (Raigad) passenger service has started. Construction of Passenger Jetty at Malvan (Sindhudurg) is completed.

9.39.5 **Marina:** Marina would help to decongest water areas by eliminating un-authorised/ disordered anchorages. In the first phase infrastructure will be developed at Belapur in Navi Mumbai to facilitate anchoring of 30 boats. The yachts and speedboats anchored at Gateway of India can be parked safely at the marina.

Air transport

9.40 There are 13 Domestic airports functioning in the State, of which five are International airports. Transport statistics of airports in the State is given in Table 9.34.

Table 9.34 Transport statistics of airports in the State

(As on 31st March)

Airport	Passenger traffic (Lakh)		Cargo traffic (MT)	
	2022	2023	2022	2023
A) Domestic	**245.65**	**446.98**	**2,51,207**	**2,87,176**
Mumbai	185.65	327.23	2,14,054	2,36,797
Pune	36.95	78.66	28,697	39,314
Nagpur	15.94	25.00	7,319	8,984
Chhatrapati Sambhajinagar	2.51	4.68	841	1,139
Juhu (Mumbai)	0.86	1.32	257	299
Jalgaon	0.08	Neg	0	0
Kolhapur	0.96	1.29	0	0
Nanded	0.20	Neg	0	0
Shirdi	1.77	7.33	38	643
Nashik (Ojhar HAL)	0.52	1.08	1	0
Gondia	0.02	0.11	0	0
Sindhudurg	0.20	0.28	0	0
Solapur	0.00	Neg	0	0
B) International	**32.12**	**114.13**	**5,57,305**	**5,40,397**
Mumbai	31.83	112.07	5,56,899	5,40,137
Pune	0.18	1.41	5	55
Nagpur	0.11	0.65	367	205
Chhatrapati Sambhajinagar	0.00	0.00	0	0
Nashik (Ojhar HAL)	0.00	0.00	34	0
Total (A + B)	**277.77**	**561.11**	**8,08,512**	**8,27,573**

Source: Airports Authority of India HAL-Hindustan Aeronautics Limited Neg - Negligible

9.40.1 To reduce air-traffic congestion at *Chhatrapati Shivaji Maharaj* International Airport, an additional international airport has been proposed at Navi Mumbai through Public Private Partnership in four phases with estimated cost of ₹ 19,647 crore for Phase I and II. It will be one of the largest greenfield airports planned to handle 90 million passengers and 2.5 million MT cargo per annum. This airport will have 1,160 ha area with two parallel and independent runways for simultaneous operation. Phase I and II of this project with overall capacity of 20 million passengers and 0.8 million MT cargo per annum is expected to commissioned by December, 2024.

9.40.2 *Ude Desh Ka Aam Naagrik* (UDAN) - Regional Connectivity Scheme (RCS) is a flagship programme of GoI, connecting unserved & underserved airports and catering to regional areas & hinterlands. UDAN- RCS aims to make flying affordable for public. Since inception of scheme upto January, 2024 about 34,216 flights have been operated through RCS airports in the State and under the scheme, about 15,45,047 passengers were benefited.

Communication

9.41 Posts, telephones, voice-video and data telecommunication are major components of the communication system. The operational statistics of postal services in the State is given in Table 9.35.

9.42 The total number of landline connections at the end of December, 2023 in the State was 50.30 lakh. The landline and cell phone connections per lakh population were 3,962 and 1,00,619 respectively. Landline and cell phone connections in the State is given in Table 9.36.

Table 9.35 Operational statistics of postal services in the State

(no.)

Particulars	Area	2021-22	2022-23
Post offices	Rural	12,192	12,160
	Urban	1,241	1,274
	Total	**13,433**	**13,434**
Letter boxes	Rural	32,045	27,555
	Urban	6,335	9,661
	Total	**38,380**	**37,216**
Delivery postmen (including *dak sevak*)	Rural	6,619	7,823
	Urban	4,804	6,149
	Total	**11,423**	**13,972**

Source: General Post Office, Mumbai

Table 9.36 Details of landline and cell phone connections in the State

(Lakh)

Operator	2021-22		2022-23		2023-24+	
	Landlines	Cell phones	Landlines	Cell phones	Landlines	Cell phones
MTNL	14.63	11.04	12.87	6.60	12.16	2.52
BSNL	7.36	66.27	6.03	63.22	5.50	58.57
Bharati	7.02	294.92$	9.23	309.98$	10.56	315.28$
Tata	6.94	-	6.72	-	8.15	-
Vodafone Idea	1.33	402.53	1.96	358.22	1.85	341.68
Reliance/Jio	6.79	491.11	10.09	520.03	11.62	559.34
Reliance com.	0.64	0.01	0.52	0.01	0.46	0.01
Total	**44.71**	**1,265.88**	**47.42**	**1,258.07**	**50.30**	**1,277.40**

$ Bharati & Tata Teleservices combined

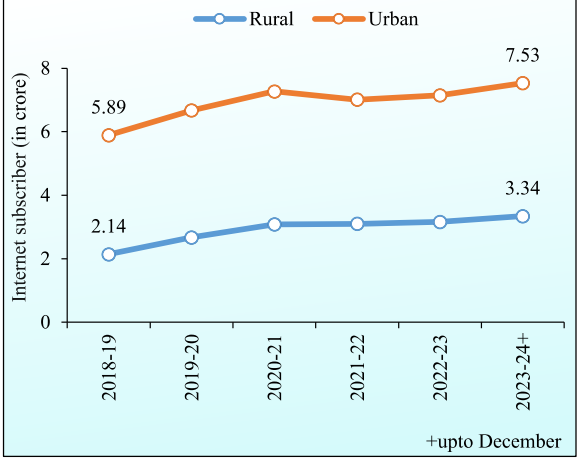
+ upto December

Source: Telecom Regulatory Authority of India

9.43 The internet subscriber in the State at the end of December, 2023 was 10.87 crore.

9.44 A public Wi-Fi hotspot is an area where Wi-Fi enabled internet can be accessed. These areas are created in places such as malls, cafe, airports, statdiums, parks, etc. There are 17,619 public Wi-Fi hotspot and 39,224 access points in the State at the end of December, 2023.

Graph 9.9 : Internet subscriber in the State



BharatNet

9.45 National Optical Fibre Network was launched in October, 2011 and was renamed as BharatNet Project in 2015 for provisioning of network connectivity to rural area /*Gram Panchayats* (GPs) to facilitate delivery of affordable Internet broadband services to citizens and institutions in rural and remote areas for provisioning of digital services.

9.45.1 BharatNet Phase-I being implemented by Bharat Broadband Network Limited and 15,379 Gram Panchayats have been connected by Optical Fiber Cable (OFC). BharatNet Phase-II (MahaNet-I) project is being implemented by Maharashtra Information Technology Corporation Limited (MahaIT) in 26 Districts, 153 Taluka and around 12,513 Gram Panchayat with about 56,067 km of OFC Network in Maharashtra through the State led implementation model and upto March, 2024, in all 73 per cent project work is completed.

Urban MahaNet

9.46 Urban MahaNet programme is aimed at providing high speed broadband connectivity for delivery of services through provision of cost effective bandwidth connectivity. This connectivity provided at various offices of GoM including urban local bodies to enable them to provide e-Governance services such as G2C and G2G. At the end of March, 2024, under this programme connectivity is provided in the State at 3,656 locations.

* * * * *

ANNEXURE 9.1

INSTALLED CAPACITY, GENERATION & CONSUMPTION OF ELECTRICITY IN THE STATE

Item	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2020-21	2022-23
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
A. Installed capacity (MW)								
A - 1 Installed Capacity in the State								
(1) Thermal	477[$]	1,065[$]	2,771	6,462	8,075	9,665	21,176	20,066
(2) Renewable Energy	--	--	--	--	--	3,408	9,846	11,476
(3) Hydro	282	844	1,317	1,552	2,874	3,066	3,061	3,061
(4) Natural Gas	--	--	--	672	1,820	2,714	2,819	2,819
Total (A-1)	**759**	**1,909**	**4,088**	**8,686**	**12,769**	**18,853**	**36,902**	**37,422**
A - 2 State's share in Installed Capacity of -								
(1) National Thermal Power Corp.	NA	NA	NA	NA	2,048[@]	4,686	7,254	7,254
(2) Nuclear Power Corporation	NA	NA	NA	NA	137	690	690	690
Total (A-2)	**NA**	**NA**	**NA**	**NA**	**2,185**	**5,376**	**7,944**	**7,944**
Total (A-1 + A-2)	**759**	**1,909**	**4,088**	**8,686**	**14,954**	**24,229**	**44,846**	**45,366**
B. Generation (MU) -								
(1) Thermal	1,903[$]	3,392	11,416	28,085	49,377	52,796	87,690	1,03,420
(2) Renewable Energy [#]	--	--	--	--	--	5,118	15,813	22,524
(3) Hydro	1,365	4,533	6,448	5,615	4,889	6,374	5,593	5,956
(4) Natural Gas	--	--	--	2,730	6,943	18,729	5,964	2,430
Total	**3,268**	**7,925**	**17,864**	**36,430**	**61,209[#]**	**83,017**	**1,15,060**	**1,34,330**
C. Consumption (MU) -								
(1) Industrial	1,853	5,312	8,130	14,706	18,363	34,416	44,109	58,856
(2) Domestic	260	732	1,779	5,065	11,172	19,546	30,229	32,741
(3) Agriculture	15	356	1,723	6,604	9,940	16,257	33,924	37,481
(4) Commercial	198	547	949	2,068	4,105	11,527	9,415	14,324
(5) Railways	339	421	766	970	1,581	2,188	135	248
(6) Public Water works	35	146	330	NA	1,199	1,983	6,090	6,111
(7) Public lighting	20	74	159	291	551	846		
(8) Other	--	62	198	267	378	633	789	1,010
Total	**2,720**	**7,650**	**14,034**	**29,971**	**47,289**	**87,396**	**1,24,691**	**1,50,771**
D. Per capita ultimate consumption of electricity (Units)								
(1) Industrial	46.8	105.4	129.5	195.4	191.2	307.2	355.8	467.2
(2) Commercial	5.0	10.9	15.1	27.5	42.7	102.9	76.0	113.7

Note - (1) The above figures are related to public utilities only. NA Not available.
(2) @ This includes additional share of 323 MW from NTPC/ NPC which was unallocated share and surplus from Goa.
(3) # This includes captive power and Renewable Energy (sold to MAHADISCOM).
(4) $ The figures for Oil are included in Thermal
(5) Installed capacity & Generation for private companies other than Tata Power Co. Ltd.& Adani Electricity Mumbai Ltd are taken from CEA website reports.
(6) 1 Unit = 1 Kilo Watt Hour.

Source - (1) CEA - Central Electricity Authority
(2) MAHAGENCO
(3) MAHADISCOM
(4) BEST
(5) MEDA
(6) Tata Power Co.Ltd.
(7) Adani Electricity Mumbai Ltd.

ANNEXURE 9.2

ROAD LENGTH BY TYPE OF ROADS IN THE STATE (MAINTAINED BY NATIONAL HIGHWAY AUTHORITY OF INDIA, PUBLIC WORKS DEPARTMENT AND ZILLA PARISHAD)

(km)

Serial No.	Year	National highways	Major State highways	State highways	Major district roads	Other district roads	Village roads	All roads
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	1965-66	2,364	--	10,528	12,628	8,744	17,524	51,788
2	1970-71	2,445	--	14,203	17,684	11,012	20,020	65,364
3	1980-81	2,945	--	18,949	25,233	25,404	68,600	1,41,131
4	1990-91	2,959	--	30,975	38,936	38,573	61,522	1,72,965
5	2000-01	3,688	--	33,212	46,751	43,696	89,599	2,16,946
6	2005-06	4,367	--	33,571	48,987	45,226	99,279	2,31,430
7	2006-07	4,367	--	33,675	49,147	45,674	1,00,801	2,33,664
8	2007-08	4,367	--	33,800	49,393	45,886	1,02,149	2,35,595
9	2008-09	4,367	--	33,933	49,621	46,143	1,03,604	2,37,668
10	2009-10	4,376	--	34,102	49,901	46,817	1,04,844	2,40,040
11	2010-11	4,376	--	34,103	49,936	46,897	1,06,400	2,41,712
12	2011-12	4,376	--	34,157	50,256	47,529	1,06,601	2,42,919
13	2012-13	4,376	6,694	27,528	50,256	47,573	1,06,745	2,43,172
14	2013-14	5,858	6,337	33,963	50,232	52,761	1,14,557	2,63,708
15	2014-15	4,766	6,163	33,860	50,585	58,115	1,45,879	2,99,368
16	2015-16	4,901	5,249	33,695	52,275	56,564	1,53,435	3,05,119
17	2016-17	7,682	3,971	30,776	51,627	56,336	1,53,946	3,04,336
18	2017-18	10,195	3,272	29,151	55,030	53,924	1,52,272	3,03,843
19	2018-19	10,300	2,967	28,466	60,531	49,206	1,57,127	3,08,597
20	2019-20	17,726	2,967	29,030	63,886	47,398	1,48,335	3,09,342
21	2020-21	18,089	2,900	29,388	68,350	46,408	1,57,980	3,23,115
22	2021-22	18,366	2,622	29,265	68,535	45,371	1,59,714	3,23,873
23	2022-23*	18,366	2,716	30,465	71,574	43,229	1,59,139	3,25,489

* Provisional

Note - (1) The classification of road length upto 1987 was according to 'Road Development Plan (RDP), 1961-81' and 1987-88 onwards it is according to 'RDP 1981-2001'.
(2) State highways include major State highways for 1965-66 to 2011-12.
(3) The classification of road length from 2012-13 is according to 'RDP 2001-21'
(4) Figures may not add up due to rounding

Source - Public Works Department, GoM

ANNEXURE 9.3

CLASSIFICATION OF DISTRICT-WISE ROAD LENGTH ACCORDING TO BREADTH (MAINTAINED BY NATIONAL HIGHWAY AUTHORITY OF INDIA, PUBLIC WORKS DEPARTMENT AND ZILLA PARISHAD)

(km)

Sr.	District	Achievement in Length 2021-22*					Achievement in Length 2022-23*				
No.	Breadth (mt.)	7.0	5.5	3.75	Other	Total	7.0	5.5	3.75	Other	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	Brihan Mumbai	49	0	0	0	49	49	0	0	0	49
2	Thane	514	284	1,132	2,489	4,419	973	679	894	1,934	4,480
3	Palghar	573	516	1,651	4,323	7,063	788	692	1,601	4,061	7,142
4	Raigad	1,370	965	3,509	2,482	8,326	2,144	2,145	2,577	1,501	8,367
5	Ratnagiri	488	906	8,358	211	9,963	1,808	1,998	5,305	905	10,016
6	Sindhudurg	200	845	3,589	3,433	8,067	636	1,994	3,472	1,981	8,083
	Konkan Division	**3,194**	**3,516**	**18,239**	**12,938**	**37,887**	**6,398**	**7,508**	**13,849**	**10,382**	**38,137**
7	Ahmednagar	1,381	1,347	11,603	6,657	20,988	1,955	3,093	10,403	5,599	21,050
8	Nashik	1,688	1,741	11,174	5,040	19,643	2,167	2,276	10,777	4,549	19,769
9	Dhule	950	463	5,390	7	6,810	1,228	1,045	4,371	206	6,850
10	Nandurbar	344	480	6,118	47	6,989	472	690	5,701	130	6,993
11	Jalgaon	1,265	1,280	5,226	5,575	13,346	1,805	1,709	4,803	5,087	13,404
	Nashik Division	**5,628**	**5,311**	**39,511**	**17,326**	**67,776**	**7,627**	**8,813**	**36,054**	**15,572**	**68,066**
12	Pune	1,755	1,395	15,815	320	19,285	1,966	1,988	15,036	401	19,391
13	Satara	725	995	9,453	2,541	13,714	1,051	1,266	8,236	3,175	13,728
14	Sangli	1,535	999	4,228	6,135	12,897	2,179	1,795	4,040	4,977	12,991
15	Kolhapur	844	1,061	3,144	3,647	8,696	1,395	1,801	2,519	3,033	8,748
16	Solapur	1,723	818	5,439	9,562	17,542	2,046	1,888	4,978	8,678	17,590
	Pune Division	**6,582**	**5,268**	**38,079**	**22,205**	**72,134**	**8,637**	**8,738**	**34,810**	**20,263**	**72,448**
17	Chhatrapati Sambhajinagar	912	819	6,659	1,888	10,278	1,459	1,402	5,943	1,597	10,401
18	Jalna	885	445	4,858	1,323	7,511	1,484	986	4,258	787	7,515
19	Parbhani	638	233	3,841	962	5,674	1,075	875	2,851	900	5,701
20	Hingoli	277	167	3,500	230	4,174	439	1,296	1,848	599	4,182
21	Nanded	1,549	175	8,829	1,683	12,236	1,795	1,518	7,346	1,597	12,256
22	Beed	1,197	437	8,259	2,586	12,479	1,688	780	8,028	2,034	12,530
23	Dharashiv	612	907	4,881	1,131	7,531	1,244	1,459	4,281	598	7,582
24	Latur	697	655	5,158	1,250	7,760	1,369	831	4,487	1,120	7,807
	Chhatrapati Sambhajinagar Div.	**6,767**	**3,838**	**45,985**	**11,053**	**67,643**	**10,553**	**9,147**	**39,042**	**9,232**	**67,974**
25	Buldhana	1,028	525	2,759	1,386	5,698	1,590	1,191	1,950	1,017	5,748
26	Akola	607	353	1,384	1,061	3,405	896	958	985	630	3,469
27	Washim	478	343	1,187	1,100	3,108	775	457	995	905	3,132
28	Amravati	1,040	712	1,698	4,722	8,172	1,330	1,391	1,432	4,085	8,238
29	Yavatmal	889	933	3,352	3,584	8,758	948	1,475	3,189	3,167	8,779
	Amravati Division	**4,042**	**2,866**	**10,380**	**11,853**	**29,141**	**5540**	**5,472**	**8,550**	**9,803**	**29,365**
30	Wardha	439	407	1,780	2,497	5,123	521	656	2,173	1,791	5,140
31	Nagpur	1,077	642	6,482	6,495	14,696	1,330	1,997	6,143	5,263	14,733
32	Bhandara	236	246	2,915	2,888	6,285	558	692	2,527	2,561	6,338
33	Gondia	308	313	3,666	3,075	7,362	475	464	3,591	2,839	7,369
34	Chandrapur	1,059	607	2,850	5,290	9,806	1,519	902	2,616	4,775	9,811
35	Gadchiroli	502	520	4,438	565	6,025	870	1,304	2,355	1,580	6,109
	Nagpur Division	**3,621**	**2,735**	**22,131**	**20,810**	**49,297**	**5,273**	**6,015**	**19,405**	**18,808**	**49,500**
	Maharashtra State	**29,834**	**23,534**	**1,74,325**	**96,185**	**3,23,878**	**44,027**	**45,693**	**1,51,708**	**84,061**	**3,25,489**

Note: Figures may not add up due to rounding
* Provisional

Source - Public Works Department, GoM

ANNEXURE 9.4

NUMBER OF MOTOR VEHICLES IN THE STATE

(As on 1st January)

Sr. No.	Class of vehicles	1971	1981	1991	2001	2011	2021	2023*	2024*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Motor-cycles, scooters & mopeds	83,930	3,46,826	16,96,157	44,09,906	1,20,60,990	2,83,40,408	3,15,89,898	3,33,23,529
2	Motor cars, Jeeps & Station wagons	1,22,508	2,24,752	4,23,505	9,01,278	23,82,789	53,88,475	62,53,313	66,80,745
3	Taxi cabs	17,806	31,302	43,168	86,438	1,82,676	3,73,237	3,79,057	4,19,964
4	Auto rickshaws	3,049	29,474	1,26,049	4,07,660	6,44,037	10,60,616	11,03,967	11,63,017
5	Stage carriages	10,250	13,789	18,203	27,286	34,061	40,482	42,708	46,015
6	Contract carriages	--	1,498	3,980	13,975	31,459	72,273	71,932	77,964
7	Lorries—						19,07,408		
	(i) Diesel engine	34,987	87,079	1,80,883	3,41,344	8,78,239	--	20,23,147	21,37,061
	(ii) Petrol engine	21,791	18,005	13,774	57,317	77,189	--	16,528	27,720
	(iii) Others (CNG, LPG, etc.)	--	--	--	NA	NA	--	91,325	99,485
	(iv) Electric	--	--	--	--	--	--	628	935
8	Ambulances	441	925	2,233	4,025	9,600	17,362	21,334	22,506
9	School buses	491	594	1,025	1,714	6,117	32,628	34,219	36,231
10	Private service vehicles	810	2,171	4,622	5,815	9,421	13,037	13,472	14,099
11	Trailers	7,075	23,173	60,858	1,67,856	2,84,696	4,32,412	4,70,511	4,83,844
12	Tractors	7,821	24,079	61,088	1,72,578	3,58,556	8,68,750	10,79,768	11,61,208
13	Others	810	1,319	5,040	9,872	29,829	89,159	1,06,733	1,19,800
	Total	**3,11,769**	**8,04,986**	**26,40,585**	**66,07,064**	**1,69,89,659**	**3,86,36,247**	**4,32,98,540**	**4,58,14,123**
	Motor vehicles per lakh of population	618	1,309	3,353	7,186	15,119	31,168	34,370	36,087
	Number of vehicles per km. road length maintained by NHAI, PWD & ZP	5	6	15	31	71	125	134	141
	Ambulances per lakh of population	0.9	1.5	2.8	4.4	8.5	14	17	18

Source - Office of the Transport Commissioner, GoM NA Not Available * Provisional