



Economic Survey of Maharashtra 2021-22



**DIRECTORATE OF ECONOMICS AND STATISTICS,
PLANNING DEPARTMENT,
GOVERNMENT OF MAHARASHTRA, MUMBAI**

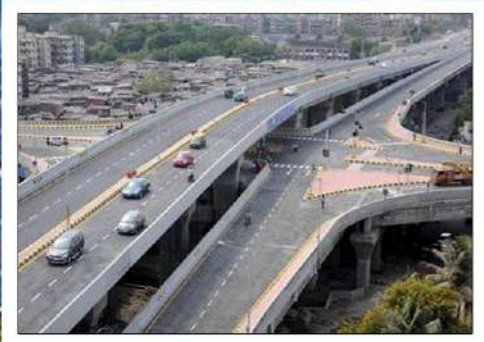
Economic Survey of Maharashtra 2021-22



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9

Infrastructure



9. INFRASTRUCTURE

9.1. Infrastructure is an accelerator of the economic growth as it impacts industrialisation, connectivity and thereby improves quality of life. The physical infrastructure mainly comprises of energy, transport and telecommunication. Maharashtra is one of the top performer states in terms of access to electricity as well as quality of electricity supply. The State is well connected by roadways, railways, waterways, airways and excellent telecommunication network.

ENERGY

9.2 The State being one of the industrialised, urbanised and populated states, the demand for energy is ever increasing. The State has succeeded to meet the increasing demand. ‘Ensure access to affordable, reliable, sustainable and modern energy for all’ is one of the Sustainable Development Goals. The State has been in the forefront in promoting clean energy. To achieve greater efficiency, the State is adopting digital technologies.

Electricity

9.3 Significant growth in installed capacity and generation of electricity is observed over the decades resulting in overall development of the State. Electricity is generated through renewable and non-renewable sources. Coal, Lignite, Crude Oil and Natural Gas are non-renewable sources of electricity generation.

Installed capacity

9.3.1 The total installed capacity of generating electricity as on 31st March, 2021 in the State was 36,902 Megawatt (MW) of which share of private sector was 59.0 per cent, public sector was 35.7 per cent and public-private partnership (PPP) (Ratnagiri Gas Power Project Ltd.) was 5.3 per cent. The share of renewable energy in the installed capacity of private sector was 45.3 per cent. The State has highest share in installed capacity (11.6 per cent) in the country. The sourcewise installed capacity is given in Table 9.1.

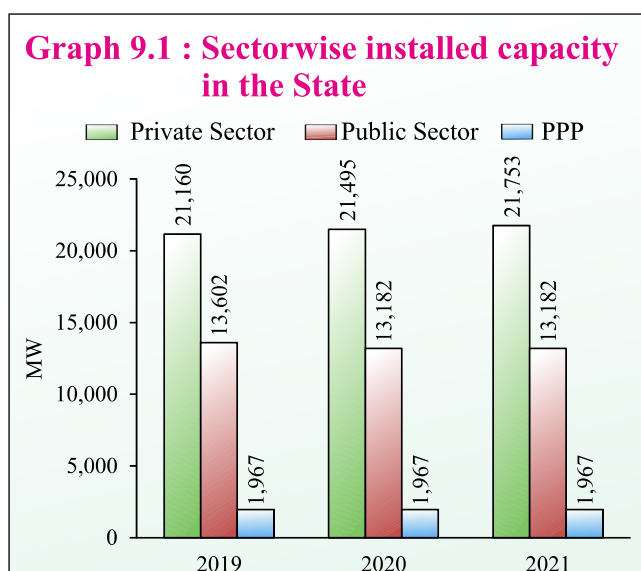


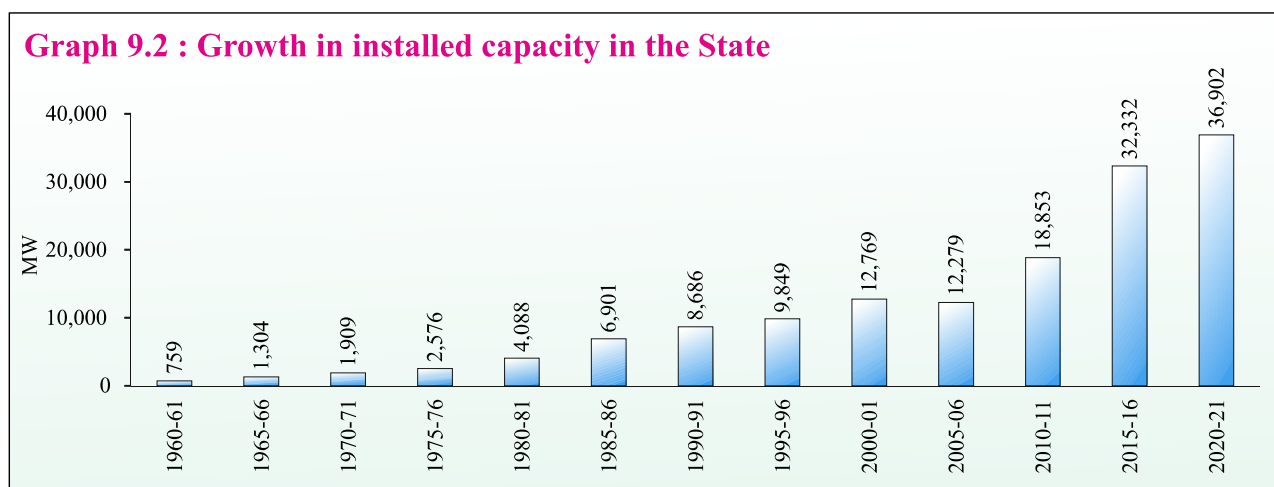
Table 9.1 Sourcewise installed capacity

(MW)

Source	As on 31 st March			As on 31 st December 2021	Per cent change in 2021 over 2020
	2019	2020	2021		
In the State	36,729	36,644	36,902	36,169	0.7
Thermal	22,096	21,176	21,176	20,066	0.0
Renewable	8,753	9,588	9,846	10,223	2.7
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	7,754	7,831	7,944	7,943	1.4

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

9.3.2 The total installed capacity in the State increased from 759 MW in 1960-61 to 36,902 MW in 2020-21 with compounded annual growth rate of 6.7 per cent. Installed capacity through thermal sources is highest with average share of 61.2 per cent over the decades. Installed capacity of renewable energy has increased significantly during last decade (3,408 MW in 2010-11 to 9,846 MW in 2020-21) with compounded annual growth rate of 11.2 per cent.



Electricity generation

9.3.3 The total electricity generated in the State was 1,15,060 Million Units (MU) during 2020-21 and electricity received from central sector was 36,611 MU. During 2021-22 upto December, total electricity generated in the State was 95,470 MU. The share of private, public and public-private partnership in total electricity generation during 2020-21 was 54.2 per cent, 43.6 per cent and 2.2 per cent respectively. Sourcewise electricity generated is given in Table 9.2.

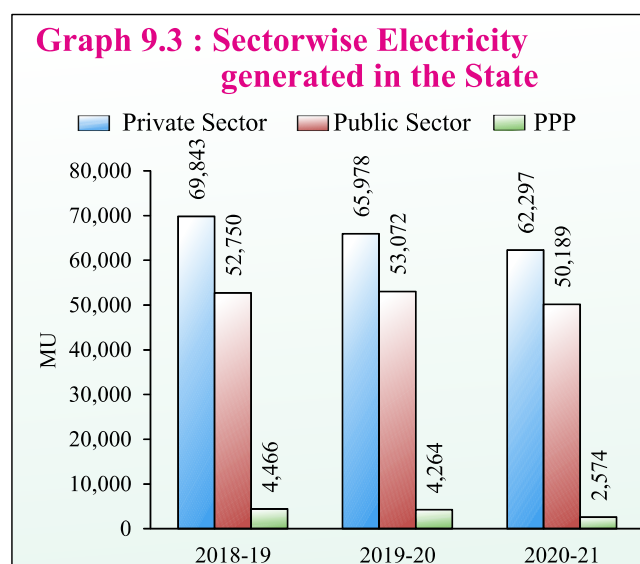


Table 9.2 Sourcewise electricity generated

Source	(MU)				Per cent change in 2020-21 over 2019-20
	2018-19	2019-20	2020-21	2021-22 ⁺	
In the State	1,27,059	1,23,314	1,15,060	95,470	(-)6.7
Thermal	98,720	95,460	87,690	72,237	(-)8.1
Natural gas	8,452	7,999	5,964	4,867	(-)25.4
Hydro	5,387	6,104	5,593	4,460	(-)8.4
Renewable ^S	14,500	13,751	15,813	13,906	15.0
Received from central sector	34,238	34,988	36,611	29,736	4.6

Note : 1 Unit = 1 Kilo Watt Hour

^S including captive

⁺ upto December

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

9.3.4 Electricity generated in the State increased from 3,268 MU in 1960-61 to 1,15,060 MU in 2020-21 with compounded annual growth rate of 6.1 per cent. Electricity generated through thermal sources increased from 1,903 MU in 1960-61 to 87,690 MU in 2020-21.

Electricity purchase

9.3.5 During 2020-21 per unit average cost of electricity purchased by MAHADISCOM was ₹ 4.68 and that of BEST was ₹ 5.81. Electricity purchased by MAHADISCOM and BEST is given in Table 9.3.

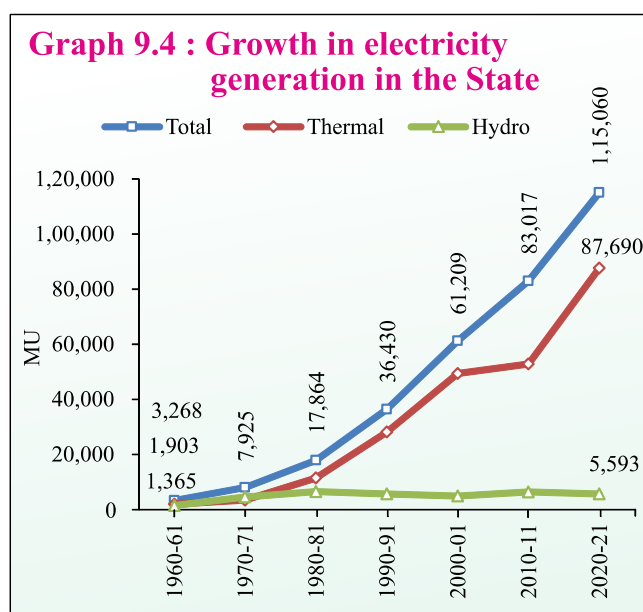


Table 9.3 Electricity purchased by MAHADISCOM and BEST

Year	MAHADISCOM		BEST	
	Electricity purchased (MU)	Total cost (₹ Crore)	Electricity purchased (MU)	Total cost (₹ Crore)
2019-20	1,32,021	66,775	4,791	2,445
2020-21	1,32,414	62,005	3,927	2,283
2021-22 ⁺	1,04,507	48,235	2,965	1,819

Source : MAHADISCOM, BEST

+ upto November

Electricity consumption

9.3.6 Aggregate consumption of electricity in the State during 2020-21 was 1,24,691 MU. The consumption of electricity in the State was highest (35.4 per cent) for industrial sector followed by agriculture (27.2 per cent) and domestic sector (24.2 per cent). Sectorwise electricity consumption is given in Table 9.4.

Table 9.4 Sectorwise electricity consumption

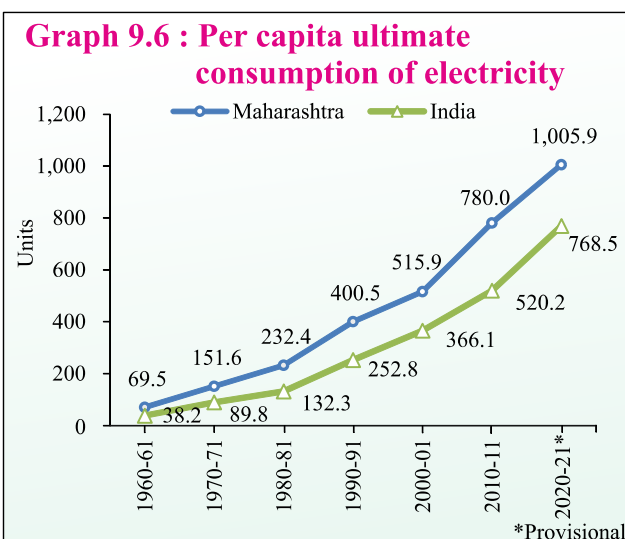
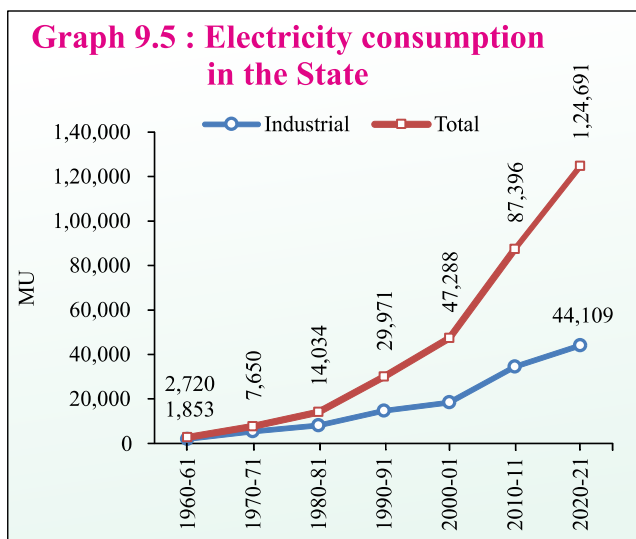
Sector	(MU)				Per cent change in 2020-21 over 2019-20
	2018-19	2019-20	2020-21	2021-22 ⁺	
Industrial	48,245	46,524	44,109	34,365	(-5.2)
Agriculture	33,722	29,115	33,924	23,213	16.5
Domestic	29,175	29,291	30,229	21,698	3.2
Commercial	13,010	12,991	9,415	7,329	(-27.5)
Public Services [@]	6,695	6,428	6,090	1,298	(-5.3)
Railways	181	185	135	110	(-27.0)
Other	823	904	789	3,550	(-12.8)
All	1,31,851	1,25,438	1,24,691	91,563	(-0.6)

[@] including public lighting & water supply works

+ upto November

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

9.3.7 Electricity consumption in the State increased from 2,720 MU in 1960-61 to 1,24,691 MU in 2020-21 with compounded annual growth rate of 6.6 per cent. Maximum increase in electricity consumption is observed in agriculture sector during 2020-21 (33,924 MU) since 1960-61 (15 MU).



9.3.8 Per capita ultimate consumption of electricity in the State and India is given in Table 9.5. The time series data on installed capacity, electricity generated, sectorwise electricity consumed and per capita ultimate consumption of electricity is given in Annexure 9.1.

Table 9.5 Per capita ultimate consumption of electricity

(Units)

Sector	2018-19		2019-20		2020-21*	
	Maharashtra	India	Maharashtra	India	Maharashtra	India
All	1,083.6	784.2	1,021.3	783.7	1,005.9	768.5
Commercial	106.9	74.6	105.8	77.6	76.0	65.2
Industrial	396.5	261.1	378.8	255.5	355.8	234.2
Agriculture	277.1	160.9	237.1	156.9	273.7	166.2
Domestic	239.8	219.0	238.5	226.7	243.9	239.1

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

Demand and supply of electricity

9.3.9 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. Electricity surplus is observed against average peak demand during last five years. 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
2018-19	18,478	19,814	1,336
2019-20	19,103	21,771	2,668
2020-21	19,250	21,881	2,631
2021-22 ⁺	18,841	20,206	1,365

Source: MAHADISCOM

+ upto November

Transmission and Distribution network infrastructure

9.3.10 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.

9.3.11 MAHATRANSCO is using Drones for survey of EHV transmission lines & scanning of EHV substations. These Drones are equipped with high resolution, normal vision & thermovision cameras along with GPS facility. These Drones are being used extensively for preventive maintenance of EHV lines, tower accessories and hardware joints which are not visible to naked eye. Use of drones enables survey of lines & sub-stations in minimum time with maximum accuracy. This helps in restoration of EHV line & sub-station in minimum down time.

9.3.12 The transmission capacity of MAHATRANSCO was about 1,30,645 Mega Volt Ampere (MVA) with the network of 49,166 circuit km transmission lines and 694 sub-stations by 2020-21. Transmission capacity has been enhanced to 1,31,981 MVA with the network line length of 49,604 circuit km with 701 sub-stations upto December, 2021. The transmission losses of MAHATRANSCO for 2019-20 & 2020-21 were 3.17 per cent & 2.93 per cent respectively whereas in 2021-22 upto December it was 3.18 per cent.

9.3.13 The distribution network of MAHADISCOM had 3,928 sub-stations, 11,07,094 circuit km line length with 7,45,818 distribution transformers by the end of 2020-21. Upto December, 2021 there were 3,953 sub-stations, 11,15,543 circuit km line length and 7,69,333 distribution transformers.

9.3.14 Distribution network of MAHADISCOM is all over Maharashtra except Mumbai city. BEST has distribution network in Mumbai city whereas Tata Power Co. Ltd. and Adani Electricity Mumbai Ltd. have distribution network in Mumbai suburban. The contribution of MAHADISCOM to the distribution utilities in the State was 87.8 per cent followed by Adani Electricity (5.8 per cent), Tata Power (3.3 per cent) and BEST (3.1 per cent) during 2020-21. The distribution losses are given in Table 9.7.

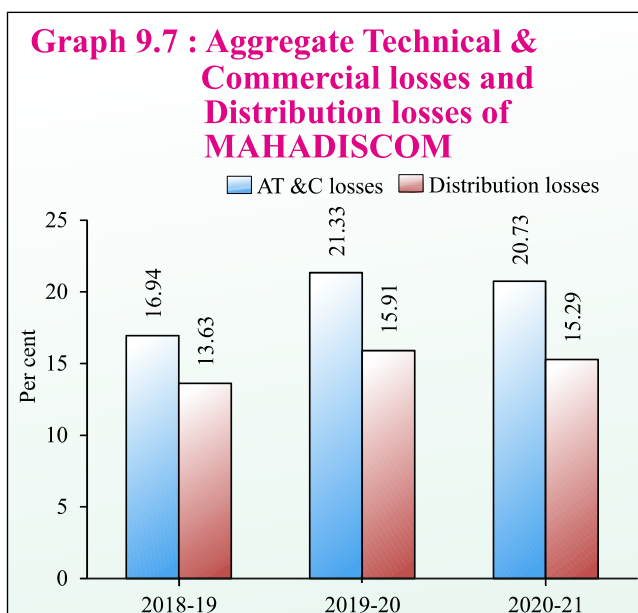


Table 9.7 Distribution losses

Licensee	(per cent)			
	2018-19	2019-20	2020-21	2021-22 ⁺
MAHADISCOM	13.63	15.91	15.29	13.31
BEST	4.18	4.62	4.82	4.16
Adani Electricity Mumbai Ltd.	7.84	7.37	7.81	7.31
Tata Power Co. Ltd.	0.27	1.02	1.02	1.07

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

+upto November

9.3.15 **Mumbai Transmission System Strengthening Project:** Considering upcoming electricity demand for Mumbai, various schemes for strengthening of Mumbai transmission system are taken by MAHATRANSCO, Adani Electricity Mumbai Ltd. and Tata Power Co. Ltd. In addition to this, the work of reconditioning of existing major Extra High Voltage (EHV) lines with High Temperature Low Sag (HTLS) conductor have also been taken up.

9.3.16 **Ujwal Discom Assurance Yojana:** GoI launched *Ujwal Discom Assurance Yojana (UDAY)* in 2015 for improving the operational and financial efficiency of the State DISCOM. Under the scheme, an amount of ₹ 4,959.75 crore has been transferred to MAHADISCOM during 2016-17. Upto March, 2021, works of feeder metering, electricity access to unconnected households, feeder segregation, rural feeder audit and distribution of LED bulbs have been completed, whereas work of transformer metering is in progress.

9.3.17 **Dr. Babasaheb Ambedkar Jeevan Prakash Yojana:** The main objective of the scheme is to provide electricity connection to households of SC/ ST category on priority. The scheme is implemented during the period of 14th April to 6th December, 2021. Upto December, 2021, in all 12,102 household connections have been released.

9.3.18 **High Voltage Distribution System Scheme:** GoM has started implementation of High Voltage Distribution System Scheme (HVDS) for providing connections to agriculture pumps in the State. Under this scheme, only one or two connections to agriculture pumps are being provided

on one transformer resulting in minimising LT distribution loss. Under this scheme, connections for paid pending agriculture pumps as on 31st March, 2018 are being provided. The scheme has been extended upto March, 2023. Under this scheme, in all 1.27 lakh connections to agriculture pumps have been provided upto December, 2021.

9.3.19 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 in project at Bhusawal is in progress, and is expected to be completed by December, 2022. GoM and Maharashtra Electricity Regulatory Commission has given in-principle approval for implementation of project with capacity of 1,320 MW at Koradi.

Regulatory measures and electricity tariffs

9.4 Maharashtra Electricity Regulatory Commission (MERC) has been set up for determination of tariff, regulation of power purchase & procurement process of transmission & distribution utilities and promotion of competition & efficiency in the electricity 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 licensees for each year. Average tariffs of electricity in 2021-22 are given in Table 9.8.

Table 9.8 Average tariffs of electricity during 2021-22

Category of user	(₹ per unit)			
	MAHADISCOM	BEST	Adani Electricity	Tata Power
LT - Domestic/Residential				
BPL	3.79	@	@	@
0-100 Units	5.96	3.57	4.92	2.27
101-300 Units	9.80	6.53	7.34	5.45
301-500 Units	12.83	8.95	8.78	9.08
Above 500 Units	13.59	10.34	9.94	9.92
LT - Commercial/Non-residential				
0-20 KW load	10.35	7.92	8.19	6.62
> 20 KW & ≤ 50 KW load	14.05	8.78	9.12	8.14
Above 50 KW load	16.21	8.84	9.63	8.23
LT - Industry				
0-20 KW load	6.96	6.98	7.39	6.23
Above 20 KW load	8.70	8.08	8.60	7.52
LT - Agriculture				
Un-metered – Pumpsets	4.55	NA	NA	NA
Metered – Pumpsets	3.72	@	@	@
Metered – Others	7.95	@	@	@
LT - Street lights (Public lighting)				
Grampanchayat and A, B & C class Municipal Councils	6.54	NA	NA	NA
Municipal Corporation areas	8.03	#	#	#
LT - Public services				
Government educational institutions & hospitals	7.72	6.68	7.15	6.63
Others	8.47	6.77	7.53	7.78
HT - Commercial	13.27	7.96	9.21	8.32
HT - Industry	8.50	7.08	7.80	7.09
HT - Railways / Metro / Monorail	8.38	7.43	7.55	7.55
HT - Public services				
Government educational institutions & hospitals	9.33	6.96	8.07	8.00
Others	10.90	7.53	8.31	7.73
HT - Agriculture pumps	4.13	NA	NA	NA

@ Average tariff not shown as no consumers or less number of consumers

NA Not Applicable

LT Street lights is included in LT Public services others

Source: MERC

Renewable energy

9.5 Renewable energies are sources of clean and inexhaustible energy. Wind, solar, biomass, biogas, sea waves, geo-thermal, etc. are the renewable and clean energy sources. MEDA is the designated agency to co-ordinate, regulate and enforce the provisions of the Energy Conservation Act, 2001. MEDA is actively engaged in propagation & promotion of renewable energy and implementation of energy conservation programmes. Government is formulating various policies & implementing various schemes for promotion & use of renewable energy.

Unconventional Energy Generation Policy, 2020

9.5.1 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, 2025. Under this policy target is to set up an environmental friendly electricity generation project with a capacity of 17,385 MW.

Salient features of the policy are as follows

- Implementation of Transmission projects by MAHADISCOM and Non-transmission projects by Maharashtra Energy Development Agency (MEDA)
- One-stop web system for administrative permissions
- Registered companies, government bodies, semi-government bodies, local self-government bodies, partnership bodies, individuals, co-operative societies, farmers groups permitted to establish projects
- Defined policies for availability of government land
- All existing non conventional energy projects encouraged to increase generation capacity

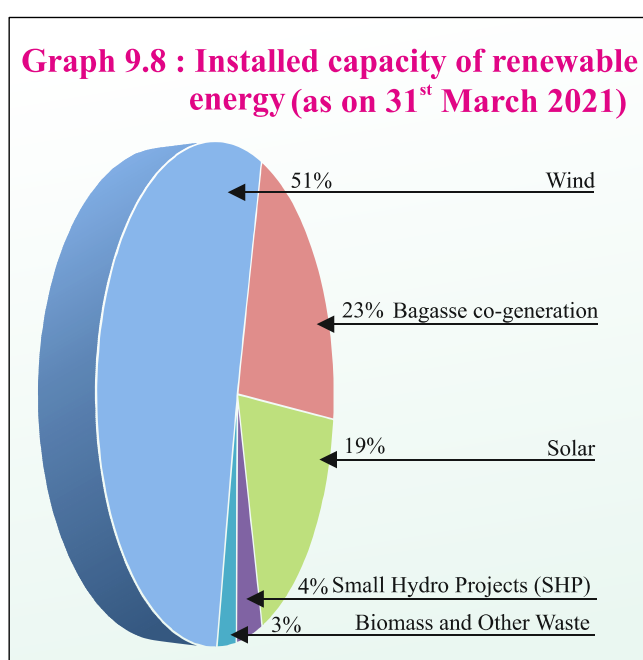
Transmission projects

- 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 non-transmission/ hybrid solar power set of capacity 260 MW, electrification of 50,000 houses, decentralised micro grid project for 100 villages, solar hot water plants & solar powered plants for cooking on two lakh sq.m. area and 4,000 solar based cold storages.

9.6.1 MERC has set a target of achieving 25 per cent electricity generation from renewable energy by 2025. Accordingly, policies have been announced by GoM for grid connected electricity generation through renewable energy sources. The State (9,846 MW) ranks fifth in India after Karnataka (15,463 MW),



Tamil Nadu (15,225 MW), Gujarat (13,153 MW) and Rajasthan (10,205 MW) in terms of installed capacity of renewable energy. Potential and installed capacity of renewable energy in the State is given in Table 9.9.

Table 9.9 Potential and installed capacity of renewable energy in the State

(MW)

Source	Potential capacity	Installed capacity			
		As on 31 st March			As on 31 st December, 2021
		2019	2020	2021	
Wind	9,400	4,792	4,998	4,998	5,011
Bagasse co-generation	2,200	2,284	2,301	2,301	2,339
Solar	7,500	1,058	1,662	1,917	2,243
Small Hydro Projects (SHP) [#]	732	366	370	370	370
Biomass	781	215	215	215	215
Industrial waste	350	35	38	42	42
Urban solid waste	287	3	3	3	3
Total	21,250	8,753	9,587	9,846	10,223

Source : MEDA

SHP (less than 25 MW capacity) installed by Irrigation Department

9.6.2 Energy conservation programme and other measures for renewable energy:

A large number of stand-alone renewable energy devices have been distributed on a subsidised basis. The achievements under Energy conservation programme and other measures are given in Table 9.10.

Table 9.10 Achievements under energy conservation program and other measures

(no.)

Particulars	Upto 31 st March, 2021
Energy conservation program	
a) Energy audit	1,620
b) Walk through energy audit	3,609
c) Demo project of energy conservation in government office buildings	113
d) Installation of energy conservation devices in municipal councils	39
Wind monitoring stations	409
Solar power plants in government buildings	360
Briquetting projects	191
Exhibitions	322

Source: MEDA

9.6.3 Renewable Purchase Obligation & Renewable Energy Certificates Mechanism:

Renewable Purchase Obligation (RPO) is the obligation mandated by MERC under the regulations to purchase specified minimum percentage of renewable energy out of the total consumption by the obligated entity (the distribution licensees, grid connected captive generating plants and open access consumers).

9.6.4 Renewable Energy Certificate is a market based instrument to promote renewable energy and to address the mismatch between available renewable energy (RE) 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 has to purchase specified minimum level of renewable energy (4.5 per cent for solar and 11.5 per cent for other renewable energy for 2020-21) out of the total conventional consumption by them. RPO achievements are given in Table 9.11.

Table 9.11 RPO achievements

Distribution Licensee	(per cent)			
	Solar Energy		Other Renewable Energy	
	2019-20	2020-21*	2019-20	2020-21*
MAHADISCOM	2.83	4.53	8.19	8.47
BEST	0.78	1.17	11.56	0.00
Adani Electricity Mumbai Ltd.	0.74	0.93	2.35	2.06
Tata Power Co. Ltd.	1.22	2.80	11.79	9.69

Source : MEDA

* Provisional

Village electrification, transmission & distribution network improvement and energy conservation schemes

9.7.1 Village electrification: There are 41,928 villages in the State, of which 41,618 villages are electrified through conventional energy and 305 villages are electrified through renewable energy. Five villages from Amravati district are rehabilitated.

9.7.2 Energisation of agricultural pumps: About 45.20 lakh agricultural pumps were energised in the State upto 31st March, 2021. During 2021-22 upto December, 1.11 lakh agriculture pumps were energised.

9.7.3 Agriculture pump energisation policy 2020: Government has declared 'Agriculture pump energisation policy' for releasing paid pending agriculture connections that have paid connection charges after 1st April, 2018. This policy aims to provide eight hours day time electricity supply to agriculture pumps through decentralised solar projects, 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.

9.7.4 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 substation. Under this scheme, agriculture feeders in the agriculture dominant areas of the State are being electrified through solar energy so that day time power can be supplied to farmers. During 2021-22 upto December, projects with capacity 396 MW are commissioned and power purchase agreement for 1,440 MW is made.

9.7.5 Pradhan Mantri Kisan Urja Suraksha evam Utthan Maha-abhiyan (PM KUSUM): GoI has launched the scheme for farmers for installation of solar pumps and grid connected solar & other renewable power plants in the country. Under this scheme 3 HP, 5 HP and 7.5 HP solar pumps are being installed and share of GoM, GoI and beneficiary is 60:30:10. The scheme is implemented in the State from 2019-20 for the period of three years. GoI has set a target of 1,00,000 solar pumps per year for the State. During 2021-22 upto December commissioning of 2,750 solar agriculture pumps is in progress.

9.7.6 Deen Dayal Upadhyay Gram Jyoti Yojana: GoI has launched this scheme in 2015 to provide electricity connection to rural households. Under the scheme it is targeted to provide electricity connection to 12.48 lakh rural households (including 3.86 lakh BPL households). Target and achievements under *Deen Dayal Upadhyay Gram Jyoti Yojana* (DDUGJY) is given in Table 9.12.

Table 9.12 Progress under Deen Dayal Upadhyay Gram Jyoti Yojana

(since inception upto December, 2021)

Particulars	Unit	Target	Achievement
New stations	no.	210	210
Augmentation/upgradation of existing transformers	no.	149	149
New transformers	no.	7,888	7,888
Feeder separation	no.	658	658
Feeder separation	km	8,891	8,891
HT line	km	5,193	5,193
LT line	km	4,331	4,331
Sansad Adarsh Gram Yojana Villages	no.	79	79
Connection to BPL Households	no.	3,86,439	3,86,439

Source : MAHADISCOM

9.7.7 Domestic Efficiency Lighting Programme: GoI is implementing Domestic efficiency lighting programme since January, 2015. The main objective of this programme is to promote efficient lighting, enhance awareness on using efficient equipment which reduce electricity bills and help preserve environment. Under the scheme, about 2.20 crore LED bulbs, 5.31 lakh LED tube lights and 1.86 lakh five star rating ceiling fans have been distributed in the State upto December, 2021.

9.7.8 Pradhanmantri Sahaj Bijali Har Ghar (Saubhagya) Yojana: GoI is implementing Saubhagya yojana since October, 2017. This scheme aims at electrifying unelectrified households in the remote areas through installed solar home light systems including five years comprehensive maintenance. Under this scheme, installation of solar home light systems in 30,538 households has been completed.

9.7.9 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. MEDA has set a target to electrify 10,000 households through solar power every year.

9.7.10 Atal Mission for Rejuvenation and Urban Transformation (Amrut Abhiyaan): Solar power projects for water supply and sewage treatment plants are being implemented under Amrut Abhiyaan. Implementation of solar power projects of total 18.4 MW at 12 municipal corporations/ councils is in progress.

9.7.11 Save Energy Programme: Energy conservation potential for industrial, agriculture, domestic and commercial sector is about 30 per cent. In order to achieve energy conservation, energy audit is first step. Energy audit involves a systematic study undertaken on major energy consuming sections and equipments with a view to identify the flow of energy and efficient use of energy in each step. Technical and financial assistance is provided to conduct systematic energy audit under the programme. In all, 1,851 such energy audits have been conducted upto December, 2021.

9.7.11.1 Scheme for walk-through energy audit for SMEs: The main objective of this program is to provide financial assistance to eligible organisations for carrying out walk-through energy audit through empanelled consultants of MEDA. MEDA remits ₹ 3,000 per walk-through energy audit to auditing firm after submission of walk-through energy audit report. About 3,839 small and medium enterprises (SMEs) participated in the scheme upto December, 2021.

Other forms of energy

Petroleum and Natural Gas

9.8.1 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	2018-19		2019-20		2020-21	
	India	Maharashtra	India	Maharashtra	India	Maharashtra
CNG Stations (number)	1,730	313	2,208	370	3,095	456
CNG Sales (TMT)	3,075.7	701.8	3,247.3	738.2	2,589.1	503.8
PNG Connections ('000)	5,079.9	1,457.3	6,101.0	1,761.3	7,864.5	1,973.9
Domestic	5,043.1	1,452.9	6,060.8	1,756.7	7,820.4	1,968.9
Industrial	8.8	0.3	10.3	0.3	11.8	0.4
Commercial	28.0	4.1	30.6	4.3	32.3	4.5

Source: Ministry of Petroleum and Natural Gas, GoI

TMT: Thousand Metric Tonnes

Consumption of Petroleum products

9.8.2 Consumption of major petroleum products in comparison with previous year indicates fall of 9.3 per cent and 14.2 per cent for India and Maharashtra respectively during 2020-21. Details of consumption of major petroleum products is given in Table 9.14.

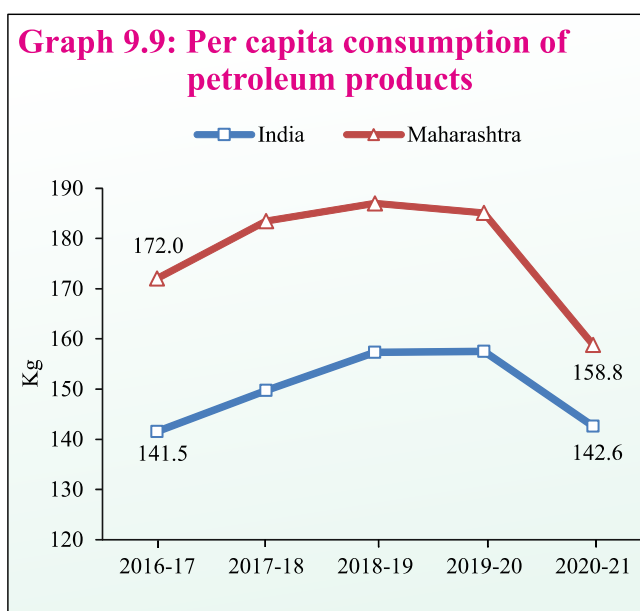


Table 9.14 Consumption of major petroleum products

Petroleum products	2019-20		2020-21*	
	India	Maharashtra	India	Maharashtra
Naphtha	14,268	345	14,100	291
Liquified Petroleum Gas (LPG)	26,330	3,124	27,558	3,089
Motor Spirit/Gasolene (MS)	29,975	3,462	27,969	3,014
Superior Kerosene Oil (SKO)	2,397	54	1,798	24
Aviation Turbine Fuel (ATF)	7,999	1,399	3,698	551
High Speed Diesel (HSD)	82,602	9,529	72,713	8,031
Light Diesel Oil (LDO)	628	81	855	140
Furnace Oil (FO)	5,912	766	5,208	667
Hot Heavy Stock (HHS)/ Low Sulphur Heavy Stock (LSHS)	390	6	378	14
Lubricants/Grease	3,833	303	4,097	330
Bitumen	6,720	653	7,524	663
Others	33,073	1,074	28,396	1,035
Total	2,14,127	20,797	1,94,294	17,849

Source : Ministry of Petroleum and Natural Gas, GoI

* Provisional

9.8.3 Details of 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 retail outlets

Particulars	2018-19		2019-20		2020-21*	
	India	Maharashtra	India	Maharashtra	India	Maharashtra
SKO/LDO Dealers (number)	6,528	767	6,521	766	6,439	752
SKO/ LDO Retail Outlets (number)	64,627	6,159	69,093	6,458	77,094	7,048
PDS SKO allocation ('000 MT)	4,433	287	3,121	107	2,315	47
PDS SKO upliftment of allocation ('000 MT)	4,152	242	2,793	53	2,039	22

Source: Ministry of Petroleum and Natural Gas, GoI

* Provisional

9.8.4 LPG Profile is given in Table 9.16.

Table 9.16 LPG Profile

Particulars	2018-19		2019-20		2020-21	
	India	Maharashtra	India	Maharashtra	India	Maharashtra
LPG Active Domestic Consumers (lakh)	2,654	269	2,787	276	2,895	288
LPG Distributors (no.)	23,737	2,134	24,670	2,184	25,083	2,206
Auto LPG Dispensing stations (no.)	661	65	657	64	651	65
Bottling Plants (no.)	192	20	196	20	200	20
Bottling capacity (TMTPA)	18,338	2,040	20,292	2,370	21,249	2,370
PMUY Beneficiaries (lakh)	719	41	802	44	800	44

Source: Ministry of Petroleum and Natural Gas, GoI

TMTPA Thousand metric tonnes per annum

9.8.5 **Pradhan Mantri Ujjwala Yojana (PMUY):** 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 this scheme, migrants are not required to submit ration cards or address proof for which self-declaration is sufficient for both 'family declaration' and 'proof of address'. *Ujjwala 2.0* helps to achieve the vision of universal access to LPG.

TRANSPORT AND COMMUNICATION

9.9 A well-developed transport and communication system ensures sustainable development of the economy. It helps in reducing the distance between regions, connecting people, creating employment opportunities, increasing productivity and facilitating the exchange of information & knowledge. The transport system comprises of roadways, railways, waterways and air transport. The various components of communication system are internet services, cell phones, postal services, telephones, etc.

Surface transport

Road network

9.10 The road network consists of highways, district roads, village roads and internal city roads. Road development plan 2001-2021 is being implemented in the State with a target to develop 3.37 lakh km roads. The total road length maintained by Public Works Department (PWD) and Zilla Parishad (ZP) (excluding road length maintained by other agencies) at the end of March, 2021 was 3.21 lakh km. The road length maintained by PWD and ZP is given in Table 9.17. Road length by type of roads in the State is given in Annexure 9.2 and district wise road length according to breadth is given in Annexure 9.3.

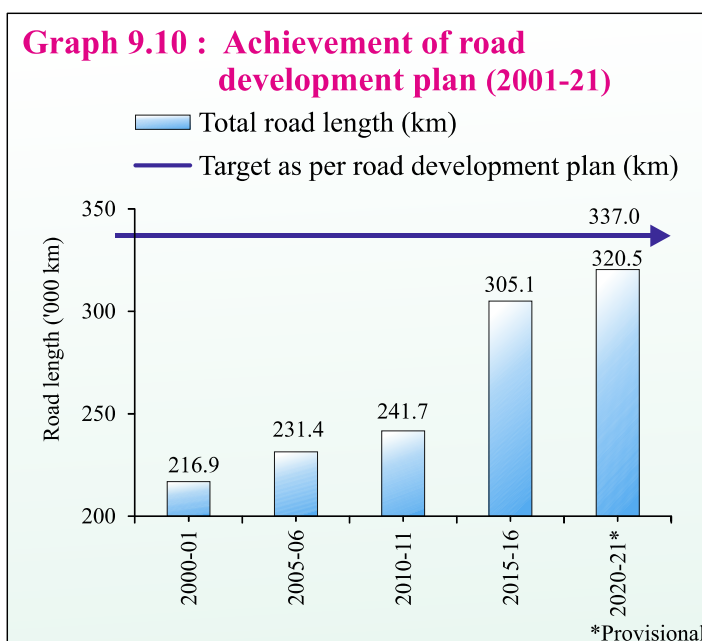


Table 9.17 Road length maintained by PWD and ZP

(As on 31st March)

Year	Roads (km)						Total
	National highways	Major state highways	State highways	Major district roads	Other district roads	Village roads	
2017-18	10,195	3,272	29,151	55,030	53,924	1,52,272	3,03,843
2018-19	10,300	2,967	28,466	60,531	49,206	1,57,127	3,08,597
2019-20	17,726	2,967	29,030	63,886	47,398	1,48,335	3,09,342
2020-21*	18,089	2,900	29,076	66,200	46,407	1,57,861	3,20,535

Note: Figures may not add up due to rounding

* Provisional

Source: Public Works Department, GoM

Central Road Fund Scheme

9.11 Government of India introduced Central Road Fund (CRF) scheme in 2001-02 for the development & maintenance of national highways, rural roads, state roads (roads of interstate connectivity & economic importance) 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. Progress of works under CRF scheme in the State is given in Table 9.18.

Table 9.18 Progress of works under CRF scheme in the State

Year	Works sanctioned (no.)	Sanctioned length (km)	Works (no.)		Physical length completed (km)	Expenditure incurred (₹ Crore)
			In progress	Completed		
2001-02 to 2017-18	1,007	10,476.72	36	947	10,105.87	4,588.16
2018-19	52	606.15	47	4	19.39	928.00
2019-20	0	0.00	0	0	0.00	800.00
2020-21*	276	1,597.04	275	0	0.00	616.00
Total	1,335	12,679.91	358	951	10,125.26	6,932.16

Note : Total 26 works have been deleted

* Provisional

Source : Public Works Department, GoM

Pradhan Mantri Gram Sadak Yojana

9.12 *Pradhan Mantri Gram Sadak Yojana* (PMGSY) is being implemented in the State since 2000. The objective of PMGSY - I is 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). In 2013, GoI has launched PMGSY – II which aims to cover upgradation of existing selected rural roads based on their economic potential and their role in facilitating the growth of rural market centres & rural hubs. In 2019, GoI launched PMGSY- III in which upgradation of roads can be undertaken and planned to give priority to roads connecting Secondary Schools, Health Centres and Market Committee Centres. Road length constructed and upgraded under PMGSY is given in Table 9.19.

Table 9.19 Road length constructed and upgraded under PMGSY

Particulars	(upto December, 2021)	
	Road length sanctioned (km)	Road length completed (km)
PMGSY-I	24,782.84	24,009.74
PMGSY-II	2,618.92	2,585.42
PMGSY-III	2,926.00	Nil

PMGSY *Pradhan Mantri Gram Sadak Yojana*

Source: Rural Development Department, GoM

Chief Minister Gram Sadak Yojana

9.13 Chief Minister *Gram Sadak Yojana* is being implemented in the State since 2015-16 for connecting unconnected habitations and up-gradation of existing rural roads which are not covered under *Pradhan Mantri Gram Sadak Yojana*. Since inception upto December, 2021 in all 30,371 km road length was sanctioned of which 17,495 km road length was completed and expenditure incurred is ₹ 9,769.09 crore.

Bharatmala Pariyojana

9.14 *Bharatmala Pariyojana* is an ambitious infrastructure programme being implemented by GoI. 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 Efficiency Improvement, Border and International connectivity roads, Coastal & Port connectivity roads and Green Field Expressways. In all 32 projects, with estimated cost worth ₹ 25,228 crore, are under implementation in the State. *Sant Tukaram Palkhi Marg* section and *Sant Dnyaneshwar Palkhi Marg* section of NH 965 are included in *Bharatmala Pariyojana*. Vadodara-Mumbai Expressway, which is part of Delhi-Mumbai

Expressway, is also being implemented in the programme. It is proposed to connect Jawaharlal Nehru Port Trust and Mumbai-Pune Expressway.

Projects of Maharashtra State Road Development Corporation

9.15 Maharashtra State Road Development Corporation (MSRDC), established for development of roads & allied infrastructure in the State mainly through private participation. The total toll collected from the partially and fully completed projects upto November, 2021 is ₹ 18,609 crore as against the total expenditure of ₹ 57,871 crore. Status of on-going projects of MSRDC is given in Table 9.20.

Table 9.20 Status of ongoing projects of MSRDC

Name of project	Commence- ment year	Estimated project cost (₹ Crore)	Expenditure incurred ⁺ (₹ Crore)	Expected year of completion
Versova- Bandra sea link project	2007-08	11,332.82	460.97	2023-24
Modernisation of border check post	2008-09	1,500.00	52.66	NA
Mumbai - Pune Expressway Augmentation	2009-10	6,695.37	1,738.59	2022-23
<i>Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg</i>	2016-17	55,335.32	39,145.21	2021-22
Pune ring road	2016-17	26,831.24	17.12	2024-25
Thane- Ghodbunder elevated road	2016-17	3,000.00	2.05	NA
Bhivandi- Kalyan -Shilphata elevated road (Phase I & II)	2016-17	2,600.00	5.62	2021-22
Thane creek bridge – Phase III	2016-17	775.58	36.93	2023-24
Ministry of Road & Transport (Deposit Work)	2016-17	9,630.00	7,108.55	NA
Virar - Alibaug Multimodal transport lane	2021-22	39,841.13	7.09	NA
Revas - Reddy- Coastal Road	2021-22	9,572.75	3.53	NA
Kokan Greenfield Expressway	2021-22	71,298.00	4.50	NA
Jalna - Nanded Expressway	2021-22	6,612.00	1.64	NA
Versova -Virar sea Link Project	2021-22	32,212.00	5.11	NA

Source: Maharashtra State Road Development Corporation

NA Not Available

+ upto December, 2021

Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg

9.16 *Hindu Hruday Samrat Balasaheb Thackeray Maharashtra Samruddhi Mahamarg* is a proposed eight lane expressway connecting Mumbai to Nagpur (701 km long and 120 m wide) and will enable travellers to cover the distance in eight hours. This expressway will pass through 10 districts, 26 talukas and 392 villages & thereby connecting 24 districts. At the crossing points of state and national highways an innovative idea of development of 24 *Krusha Samruddhi Kendra* is proposed. This corridor is proposed to connect industrial places (Butibori, Wardha, Amravati, Jalna, Chikalthana, Shendra, Waluj and Sinnar), tourist & pilgrimage places (Sewagram, Karanja (Lad), Lonar, Sindkhedraja, Ellora and Shirdi). Upto December, 2021 about 75 per cent of work is completed and expenditure incurred is ₹ 39,145 crore.

Projects of Mumbai Metropolitan Region Development Authority

9.17 Mumbai Metropolitan Region (MMR) comprises of entire area of Mumbai City, Mumbai Suburban and parts of Thane, Raigad and Palghar districts. MMR covers 6,328 sq km area under nine municipal corporations, eight municipal councils, 35 census towns & about 1,469 villages. Mumbai Metropolitan Region Development Authority (MMRDA) has undertaken various

infrastructure projects in MMR. Status of on-going transport projects in MMR is given in Table 9.21.

Table 9.21 Status of on-going transport projects in Mumbai Metropolitan Region

(₹ Crore)

Name of project	Commencement year	Cost of project	Expenditure incurred ⁺	Expected year of completion	Current status
EXTENDED MUIP:					
Phase - I, II & III : Roads, Flyovers	2007	6,235.12	5,189.12	2022	Work in progress
Outer Area Road Development Scheme	2014	1,259.65	581.87	2022	Work in progress
Santacruz – Chembur Link Road (SCLR) Kurla to Vakola Phase I	2016	645.00	382.48	2022	Work in progress
Bharat Diamond Bourse to Wakola Junction Phase II (under extension of SCLR)	2017	196.00	127.49	2022	Work in progress
Mumbai Trans – Harbour link : Construction of bridge across the sea from Sewri to Nhava (22 km)	2017	17,843.00	10,239.75	2023	Work in progress
Traffic improvement of Chheda Nagar Junction Ghatkopar (E) on Eastern Express Highway	2018	223.85	105.95	2022	Work in progress
Construction of 6 Lane Tunnel from Tikujiniwadi in Thane City to Sanjay Gandhi National Park, Borivali	2020	11,270.88	-	2026	Work in progress
Construction of flyover at Kalanagar Junction Bandra East	2017	103.00	97.00	2021	Work in progress

Source: Mumbai Metropolitan Region Development Authority

+ upto October, 2021

Mumbai Coastal Road Project (South)

9.18 The Coastal Road Project of eight lane road including three interchanges of length 10.58 km from Princess Street flyover to Worli end of Bandra Worli Sea Link is undertaken by Municipal Corporation of Greater Mumbai. This project comprises of twin tunnel each 3.45 km long equipped with latest technology. About 70 ha reclaimed area is reserved for green belt & recreational facilities. The project 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 work is commenced from October, 2018 and planned to be completed by December, 2023. The total estimated cost of the project is ₹ 12,721 crore. At the end of September, 2021 about 40 per cent work is completed and expenditure incurred is ₹ 3,401.03 crore.

Motor vehicles

9.19 The total number of motor vehicles on road in the State as on 1st January, 2022 is 4.09 crore showing an increase of about 5.9 per cent over the previous year. Of the total registered vehicles in the State, about 10.3 per cent vehicles were in Brihanmumbai. The number of vehicles per km road length (roads maintained by PWD and ZP) in the State was 128. Categorywise number of motor vehicles on road is given in Table 9.22 and its series is given in Annexure 9.4.

Table 9.22 Categorywise number of motor vehicles on road

('000)

Category of vehicles	As on 1 st January					
	Maharashtra			Brihanmumbai		
	2021*	2022*	Per cent change	2021*	2022*	Per cent change
Two wheelers (motorcycles, scooters & mopeds)	28,340.41	29,946.07	5.7	2,386.61	2,502.61	4.9
Auto rickshaws	1,060.62	1,073.87	1.2	231.59	232.44	0.4
LMV (cars, jeeps, station wagons & taxis)	5,761.71	6,182.10	7.3	1,312.62	1,358.84	3.5
Buses (stage carriages, contract carriages, school buses & PSV)	158.42	157.43	(-)0.6	18.77	12.84	(-) 31.6
Goods vehicles [articulated/multi-axial vehicles, trucks & lorries, tankers, delivery vans (3 & 4 wheelers) etc.]	1,907.41	2,008.97	5.3	93.85	99.47	6.0
Tractors	868.75	979.78	12.7	0.21	0.23	5.1
Trailers	432.41	453.39	4.9	0.14	0.15	7.1
Ambulances	17.36	20.41	17.5	1.71	1.94	13.4
Others	89.16	94.50	6.0	3.44	4.41	28.3
Total	38,636.25	40,916.49	5.9	4,048.93	4,212.92	4.1

Source : Office of the Transport Commissioner, GoM PSV - Public Service Vehicles LMV - Light Motor Vehicles *Provisional

9.19.1 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 December, 2021 was 375.34 lakh, showing an increase of three per cent over the previous year. The number of learning licenses issued in the State during 2021 was 32.88 lakh.

Public passenger road transport facility

Maharashtra State Road Transport Corporation

9.20 Maharashtra State Road Transport Corporation (MSRTC) provides passenger services to commuters within the State as well as to its 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 9.23. The transport statistics of MSRTC is given in Table 9.24.

Table 9.23 Percentage of villages covered and population served by MSRTC bus service

Bus Service	Percentage of Villages Covered		Percentage of Population Served	
	2019-20	2020-21	2019-20	2020-21
Direct	78.2	76.8	93.0	92.4
Upto 3 km	14.2	15.1	4.6	5.3
Between 3 to 5 km	4.4	4.7	1.4	1.4
Beyond 5 km	3.2	3.4	0.9	0.9

Source : Maharashtra State Road Transport Corporation

Table 9.24 Transport statistics of MSRTC

Item	Unit	2019-20	2020-21*#	2021-22 ⁺
Total vehicles in possession	Number	18,272	17,358	17,179
Average no. of buses on road per day	Number	15,505	7,960	8,665
Total employees (as on 31 st March)	Number	1,00,171	95,229	92,164
Average effective km operated per day	Lakh	53.29	23.61	25.27
Average no. of passengers carried per day	Lakh	60.07	15.04	15.03
Vehicle productivity	Km	291.64	136.01	147.08
Crew productivity	Km	217.15	213.14	205.36
Bus Staff ratio (on road vehicles)	-	6.54	11.96	10.63
Average seating capacity	Number	43.06	42.79	42.67
Percentage load factor (excluding value of concessions)	Percent	51.3	45.8	32.6
Percentage load factor (including value of concessions)	Percent	68.4	53.8	31.8

Operations of MSRTC are restricted during Covid-19 lockdown period

* Provisional

+upto September

Source : Maharashtra State Road Transport Corporation

9.20.1 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 9.25.

Table 9.25 Transport statistics of fairs & casual contracts of MSRTC

Particulars	Fairs		Casual contracts					
	2019-20	2020-21	2019-20			2020-21		
			Conces- sional	Non- Conces- sional	All	Conces- sional	Non- conces- sional	All
Effective km (lakh)	169.45	0.00	119.46	101.18	220.64	209.18	0.05	209.23
Income earned (₹ crore)	68.56	0.00	35.29	79.77	115.06	131.52	0.01	131.53
Earnings per km (₹)	40.46	0.00	29.54	78.84	52.15	62.87	30.43	62.87

Note: Figures may not add up due to rounding

Source : Maharashtra State Road Transport Corporation

9.20.2 Various types of concessions in bus fares are provided to students, senior citizens (above 65 years of age), cancer patients, freedom fighters, etc. by MSRTC and amount of concession is reimbursed by GoM. During 2020-21, amount of concessions given was ₹ 377.73 crore.

9.20.3 The toll charges paid by MSRTC during 2019-20 and 2020-21 were ₹ 128.29 crore and ₹ 67.65 crore respectively.

9.20.4 The number of accidents and compensation paid by MSRTC is given in Table 9.26.

Table 9.26 Number of accidents and compensation paid by MSRTC

Particulars	2019-20	2020-21
Accidents (no.)	3,337	1,444
Persons killed (no.)	474	166
Persons injured (no.)	4,703	1,291
Rate of accidents per lakh km	0.17	0.17
On the spot payment (₹ crore)	0.29	0.12 [@]
Final compensation (₹ crore)	50.52	30.94 [@]

NA Not Available

[@] Unaudited

Source : Maharashtra State Road Transport Corporation

Freight transport by MSRTC

9.21 MSRTC has commenced goods transport service from May, 2020. To carry out transport of goods, MSRTC has made alteration in the internal structure of passenger buses and made available 1,130 buses for goods transportation. Upto September, 2021 in all 1,254 lakh ton goods have been transported.

City public passenger road transport

9.22 The public passenger road transport is one of the major modes of passenger transport in cities. This facility is available in 22 cities in the State. Of these, MSRTC provides local passenger transport facility in seven cities, Brihanmumbai Electricity Supply & Transport (BEST) in Brihanmumbai, Pune Mahanagar Parivahan Mahamandal Ltd (PMPML) in Pune & Pimpri-Chinchwad Municipal Corporation area and in remaining 12 cities respective Municipal Corporations/ Councils provide transport facilities. City public passenger road transport statistics is given in Table 9.27.

Table 9.27 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)	
	2020	2021	2020	2021	2020	2021
MSRTC (City operations)	283	293	1.18	0.12	0.44	0.08
BEST	2,839	3,143	25.08	12.73	4.41	5.50
Pune Mahanagar Parivahan Mahamandal Limited	1,383	714	10.47	2.78	2.89	1.53
Navi Mumbai Municipal Transport	326	282	1.83	0.92	0.80	0.66
Nagpur Municipal Transport	321	157	0.71	0.40	0.66	0.31
Thane Municipal Transport	274	156	1.58	0.53	0.50	0.29
Vasai-Virar Municipal Transport	130	42	1.00	0.20	0.25	0.07
Kolhapur Municipal Transport	94	33	0.71	0.17	0.21	0.07
Solapur Municipal Transport	28	12	0.14	0.02	0.05	0.03
Kalyan-Dombivli Municipal Transport	65	33	0.34	0.08	0.10	0.04
Mira-Bhayander Municipal Transport	44	21	0.35	0.13	0.11	0.06
Amravati Municipal Transport	25	Nil	0.27	Nil	0.03	Nil
Akola Municipal Transport	16	Nil	Nil	Nil	Nil	Nil
Khopoli Municipal Transport	16	Nil	0.04	Nil	0.02	Nil
Latur Municipal Transport	15	13	0.05	0.05	0.02	0.03
Ahmednagar Municipal Transport	12	15	0.05	0.07	0.02	0.03

Note : Operations of public passengers transport are restricted during Covid-19 lockdown period

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

Road Safety

9.23 Plays and lectures based on theme of road safety are organised every year in the State. The number of accidents per ten thousand vehicles was seven in the State during 2021. Road accident statistics is given in Table 9.28.

Table 9.28 Road accident statistics

(no.)

Year	Accidents		Persons killed		Persons injured	
	State	Brihanmumbai	State	Brihanmumbai	State	Brihanmumbai
2019	32,925	2,872	12,788	447	28,628	2,925
2020	24,971	1,812	11,569	349	19,914	1,740
2021*	29,493	2,230	13,528	387	23,077	1,942

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

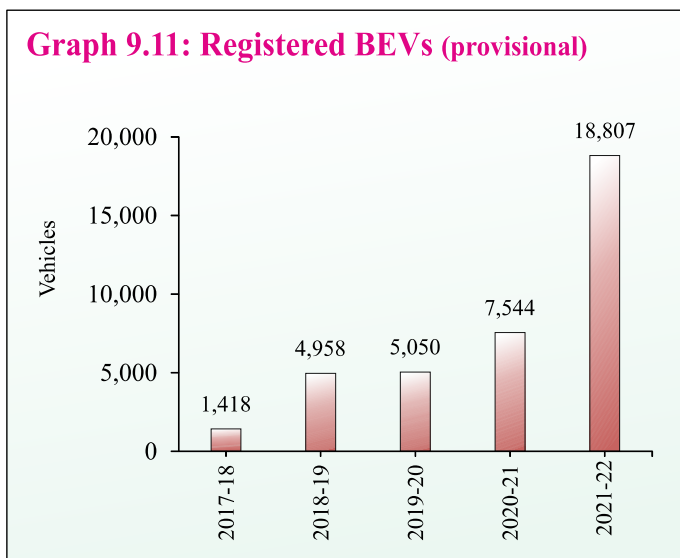
* Provisional

Maharashtra Electric Vehicle Policy, 2021

9.24 State has announced Maharashtra Electric Vehicle Policy, 2021 in July, 2021. Main objectives of the Policy are as follows:

- To accelerate adoption of Battery Electric Vehicles (BEVs) so as to contribute to 10 per cent of new vehicle registrations by 2025
- To achieve 25 per cent electrification of public transport in six urban agglomerations viz. Mumbai, Pune, Nagpur, Nashik, Aurangabad and Amravati by 2025
- To achieve 25 per cent electrification of fleet operated by fleet operators, fleet aggregators and last-mile delivery vehicles in six urban agglomerations viz. Mumbai, Pune, Nagpur, Nashik, Aurangabad & Amravati by 2025
- Transition of 15 per cent of Maharashtra State Road Transport Corporation's (MSRTC) existing bus fleet to electric by 2025
- To make Maharashtra the top producer of BEVs in India, in terms of annual production capacity

Number of BEVs registered in the State upto December, 2021 is 46,040.



Railway

9.25 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, 2021 was 6,203.93 km, which is 9.1 per cent of the total railway route length (68,102.79 km) of India. The status of on-going railway works in the State is given in Table 9.29.

Table 9.29 Status of on-going railway works

(As on 30th November, 2021)

Name of the route	Route length (km)	Total project cost (₹ Crore)	Physical progress (per cent)
Pune-Miraj-Londha (doubling)	466	4,670.00	25
Wardha-Nanded via Yavatmal-Pusad (new line)	284	3,445.48	27
Itarsi - Nagpur 3 rd line	280	2,449.91	16
Ahmednagar-Narayandoh -Beed-Parli- Vajinath (new line)	261	4,794.60	65
Daund-Manmad	248	2,081.27	31
Manmad - Jalgaon 3 rd line	160	1,035.16	25
Wardha - Ballarshah 3 rd line	132	1,283.49	29
Wardha - Nagpur 4 th line	76	637.95	36
Wardha - Sewagram-Nagpur 3 rd line	76	540.02	42
Kalyan - Kasara 3 rd line	68	1,387.52	27
Baramati - Lonand (new line)	64	736.44	50 ^S
Belapur - Seawood-Uran (new line)	54	2,980.41	71 ^{SS}
Bhusawal - Jalgaon 3 rd line	24	325.00	100
Jalgaon - Bhusawal 4 th line	24	261.37	55

Source: Central Railway

\$ Phaltan to Lonand route commissioned

\$\$ Belapur to Kharkopar route commissioned

Mumbai suburban railway

9.26 Suburban railway is the major mode of public transport in Mumbai. 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 year 2020-21, everyday fleet of 228 local trains was utilised to run 3,037 train services, carrying on an average 14.2 lakh passengers.

9.27 Mumbai Railway Vikas Corporation Ltd. (MRVC) implements rail component of Mumbai Urban Transport Projects (MUTP). The works undertaken in MUTP I are completed. The status of on-going projects of MUTP II, III & 3A is given in Table 9.30.

Table 9.30 Status of on-going projects of MUTP II, III & 3A

(As on 31st January, 2022)

Name of project	Length of corridor (route kilometer)	Estimated cost (₹ Crore)	Expenditure incurred (₹ Crore)	Expected year of completion
MUTP II				
Thane-Diva (additional 5 th & 6 th line)	9.44	502.36	618.39	February, 2022 [@]
Mumbai Central - Borivali (additional 6 th line)	29.50	918.53	508.58	March, 2024
CSMT-Kurla (additional 5 th & 6 th line)	15.39	1,367.00	375.20	March, 2024
MUTP III				
New suburban corridor between Pandal- Karjat on CR	28	2,782.00	423.20	December, 2024
New suburban corridor link between Airoli-Kalwa (elevated) on CR	4	476.00	149.01	December, 2024
Quadrupling of Virar-Dahanu road on WR	63	3,578.00	322.13	March, 2025
Trespass Control on Mid-section on CR & WR	-	551.00	203.05	March, 2024
MUTP 3 A				
Kalyan-Badlapur (3 rd & 4 th line)	14.05	1,510.00	2.95	March, 2025
Station Improvement	-	947.00	0.00	March, 2025
Borivali-Virar (5 th & 6 th line)	26	2,184.00	1.66	March, 2026
Kalyan -Asangaon (4 th line)	32.22	1,759.00	1.10	March, 2025
Extension of Harbour Line between Goregaon- Borivali	7.08	825.58	0.00	March, 2026

Source : Mumbai Railway Vikas Corporation

@ Completed

CSMT Chhatrapati Shivaji Maharaj Terminus

9.28 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 injured on Mumbai suburban railway route is given in Table 9.31.

Table 9.31 Number of accidental deaths and injured on Mumbai suburban railway route

Cause of accident	2019		2020		2021	
	Deaths	Injured	Deaths	Injured	Deaths	Injured
Line cross	1,455	276	730	129	1,114	176
Fall in gap	4	7	1	1	2	3
Fall down from train	611	1,406	177	361	277	442
Hitting railway poles	9	55	2	12	6	17
Other ^s	612	1,450	206	375	353	468
All	2,691	3,194	1,116	878	1,752	1,106

^s Includes electric shock, suicide, natural deaths, cases referred for forensic analysis, etc.

Source : Mumbai Railway Police Commissionerate, GoM

Metro Rail Projects

9.29 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.

9.29.1 **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 9.32.

Table 9.32 Status of on-going metro rail projects in MMR

(₹ Crore)

Metro Line /Name of project	Commencement year	Cost of project	Expenditure incurred ⁺	Expected year of completion	Status ⁺
2A - Dahisar-D.N. Nagar (18.6 km)	2016	6,410.00	3,816.44	March, 2022	Civil & System works are in final stage of completion by DMRC
2B- D.N. Nagar -Mandale (23.6 km)	2018	10,986.00	1,565.81	June, 2024	1. 14.2 per cent of civil works completed 2. Retender for one package is in progress
3 Colaba-Bandra-SEEPZ (33.5 km)	2016	33,406.00	19,967.92 ⁺⁺	2022-23	71.5 per cent works completed
4 Wadala-Ghatkopar-Thane-Kasarwadavli (32 km)	2018	14,549.00	1,329.85	February, 2024	33.8 per cent civil works completed
4A Kasarwadavli – Gaimukh (2.7 km)	2019	949.00	122.65	February, 2024	24 per cent civil works completed
5 Thane-Bhiwandi-Kalyan (23.5 km)	2019	8,417.00	442.59	October, 2024	1. Civil work is in progress for Phase-I (Thane-Bhiwandi) 2. 43.8 per cent of civil works completed
6 Swami Samarth Nagar-Vikhroli (14.5 km)	2018	6,716.00	1,066.86	February, 2024	40.5 per cent civil works completed by DMRC
7 Andheri (E)-Dahisar (E) (16.5 km)	2016	6,208.00	3,017.55	March, 2022	Civil & System works are in final stage of completion
8 Dahisar (E) – Mira Bhayandar and Andheri – CSMIA (13.5 km)	2019	6,607.00	586.48	October, 2024	23.2 per cent Civil works completed
9 Gaimukh-Shivaji chowk (Mira Road)	-	4,476.00	0.83	October, 2024	Appointment of General Consultant is under finalisation

CSMIA *Chhatrapati Shivaji Maharaj* International Airport

+ upto December, 2021

++ upto January, 2022

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

9.29.2 **Navi Mumbai metro rail project:** The State Government is implementing Navi Mumbai metro rail project through CIDCO in phases. CIDCO is developing an elevated Metro Rail line from CBD-Belapur-Pendhar having elevated length of 11.10 km with 11 stations in first phase with estimated project cost of ₹ 3,063.63 crore. The expenditure incurred upto December, 2021 is ₹ 2,270 crore.

9.29.3 **Nagpur metro rail project:** Nagpur Metro rail project consist of 38 stations covering length of 38.22 km. The entire stretch of this project is divided into two corridors viz. North-South corridor (19.81 km length with 18 stations) and East-West corridor (18.41 km length

with 20 stations). At the end of January, 2022 about 98.1 per cent work was completed incurring expenditure of ₹ 8,462.32 crore. Khapri to Kasturchand park of North-South corridor (15.2 km) and Lokmanya nagar to Sitabuldi of East-West corridor (11 km) are commissioned.

9.29.4 Pune metro rail project: Pune metro rail project consists of two corridors with total length of 33.28 km. Pimpri-Chinchwad to Swargate corridor (Purple line) is of 17.53 km length (11.45 km elevated stretch and 6.08 km underground stretch) with 9 elevated and 5 underground stations. Vanaz to Ramwadi corridor (Aqua line) with length 15.75 km is totally elevated with 16 stations. The total estimated cost of the project is ₹ 11,420 crore. At the end of January, 2022 about 69 per cent work is completed and expenditure incurred is ₹ 7,764.12 crore.

Water transport

9.30 Water transport is cheaper and environment friendly as compared to other transport facilities. Maharashtra Maritime Development Policy-2016 is being implemented in the State to boost the maritime by developing infrastructural facilities and thereby achieving industrial development. The policy covers areas viz. Greenfield ports & connectivity, jetties, coastal shipping & inland waterways, shipyards, coastal economic zones & facilitation of maritime projects, etc. Concessions are also given on electricity duty, non-agriculture cess, stamp duty, port charges and discount on royalty for port projects.

9.30.1 **Major ports:** Two major ports viz. Mumbai Port and Jawaharlal Nehru Port are located in the State. During 2020-21, Mumbai Port and Jawaharlal Nehru Port handled 533.24 lakh MT and 648.09 lakh MT cargo traffic respectively. Transport statistics of major ports is given in Table 9.33.

Table 9.33 Transport statistics of major ports

Particulars	Mumbai Port		Jawaharlal Nehru Port	
	2019-20	2020-21	2019-20	2020-21
Total cargo capacity (lakh MT)	778.50	828.50	1,188.30	1,188.30
Cargo traffic handled (lakh MT)	606.95	533.24	684.49	648.09
<i>Of which</i> a) Import	418.63	359.38	408.51	352.49
b) Export	188.32	173.86	275.98	295.60
Passenger traffic handled ('000)	175.10	Nil [#]	Nil	Nil
Vessels handled (no.)	6,162	5,140	2,498	2,490

Source : Mumbai Port trust & Jawaharlal Nehru Port trust # No passenger traffic was handled during Covid-19 lockdown

9.30.2 **Non-major ports:** There are number of captive and multi-purpose jetties set-up within the limits of 48 non-major ports in the State which also undertake cargo handling. The transport statistics of non-major ports is given in Table 9.34.

Table 9.34 Transport statistics of non-major ports

Particulars	2019-20	2020-21	2021-22 ⁺
Cargo traffic handled (lakh MT)	436.61	225.26	355.48
<i>Of which</i> a) Import	369.04	191.79	284.73
b) Export	67.57	33.47	70.75
Passenger traffic handled (lakh)	159.07	32.58	94.97
<i>Of which</i> a) By mechanised vessels	157.30	32.26	94.74
b) By non-mechanised vessels	1.77	0.32	0.23

Source : Maharashtra Maritime Board

+upto December

9.30.3 **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. As a part of *Sagarmala*, projects have been identified across the areas of port modernisation & new port development, port connectivity enhancement, port led industrialisation and community development. Under this programme, GoI has sanctioned 32 projects in the State to develop infrastructure facilities at ports with estimated cost of ₹ 879.06 crore. Of which 8 projects with total cost of ₹ 200.88 crore are completed and 13 projects with estimated cost of ₹ 258.79 crore are under progress.

9.30.4 Roll on – Roll off (ro-ro) services have been started at New *Bhaucha Dhakka* (Mumbai) - Mandwa (Raigad) and Agardanda - Dighi in Raigad district. Construction of Tourism jetty at Belapur (Navi Mumbai) is completed. Construction works of ro-ro jetties are in progress at Gorai-Borivali, Marve-Manori, Bhayander-Vasai and Naringi - Kharvadeshri, *Bhaucha Dhakka* - Kashid and Karanja- Rewas waterways. Construction works of jetties at Mira-Bhayandar, Kolshet, Kalher and Dombivali have been initiated.

9.30.5 **Marina:** Marina would help decongest water areas by eliminating un-authorised/unorganised 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

9.31 There are 13 airports functioning in the State. Transport statistics for selected airports is given in Table 9.35.

Table 9.35 Transport statistics for selected airports

(As on 31st March)

Airport	Passenger traffic (Lakh)		Cargo traffic (MT)	
	2020	2021	2020	2021
A) Domestic	458.49	133.96	3,30,170	1,86,537
Mumbai	335.18	98.36	2,82,506	1,52,382
Pune	79.27	21.33	37,645	26,419
Nagpur	29.46	9.48	8,669	6,714
Aurangabad	3.46	1.45	981	776
Juhu (Mumbai)	1.58	0.60	362	145
Jalgaon	0.15	0.06	0	0
Kolhapur	1.31	0.71	0	0
Nanded	1.37	0.28	0	0
Shirdi	5.69	0.86	0	0
Ojhar Nashik (HAL)	1.02	0.83	7	101
B) International	125.21	12.23	5,82,534	4,40,596
Mumbai	122.49	12.18	5,81,276	4,40,584
Pune	1.55	0.05	341	0
Nagpur	1.15	Neg	917	12
Aurangabad	0.02	0	0	0
Total (A + B)	583.70	146.19	9,12,704	6,27,133

Source : Airports Authority of India

HAL Hindustan Aeronautics Limited

Neg Negligible

9.31.1 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 basic cost of ₹ 14,179 crore for Phase I. It is one of the largest greenfield airports planned to handle minimum six crore passengers and 15 lakh MT cargo per annum.

Communication

9.32 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 9.36.

9.33 The internet subscriber base in the State at the end of September, 2021 was 10.22 crore.

9.34 The total number of landline connections at the end of December, 2021 in the State was 44.71 lakh. The landline and cell phone connections per lakh population were 3,576 and 1,01,266 respectively.

Table 9.36 Operational statistics of postal services in the State

Particulars	Area	(no.)	
		2019-20	2020-21
Post offices	Rural	11,501	11,504
	Urban	1,244	1,240
	Total	12,745	12,744
Letter boxes	Rural	31,656	31,936
	Urban	6,449	6,351
	Total	38,105	38,287
Delivery postmen (including <i>dak sevak</i>)	Rural	2,527	2,842
	Urban	4,615	4,797
	Total	7,142	7,639

Source : General Post Office, Mumbai

Landline and cell phone connections in the State is given in Table 9.37.

Table 9.37 Landline and cell phone connections in the State

(Lakh)

Operator	2019-20		2020-21		2021-22 ⁺	
	Landlines	Cell phones	Landlines	Cell phones	Landlines	Cell phones
MTNL	16.98	11.78	15.84	11.35	14.63	11.04
BSNL	8.78	70.51	7.37	68.24	7.36	66.27
Bharati	5.12	260.21 [§]	5.63	291.88 [§]	7.02	294.92 [§]
Tata	7.97	-	7.14	-	6.94	-
Vodafone Idea	1.16	508.39	1.47	435.62	1.33	402.53
Reliance/Jio	2.51	455.33	4.96	518.51	6.79	491.11
Reliance com.	1.74	0.03	0.76	0.02	0.64	0.01
Total	44.26	1,306.27	43.17	1,325.62	44.71	1,265.88

§ Bharati & Tata Teleservices combined

+ upto December

Source : Telecom Regulatory Authority of India

* * * * *

ANNEXURE 9.1

ELECTRICITY SUPPLY & CONSUMPTION IN THE STATE

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

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

NA Not available.

Note - (1) The above figures are related to public utilities only.
(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 & Adani Electricity are taken from CEA website reports.
(6) 1 Unit = 1 Kilo Watt Hour.

ANNEXURE 9.2

**ROAD LENGTH BY TYPE OF ROADS IN THE STATE
(MAINTAINED BY PUBLIC WORKS DEPARTMENT AND ZILLA PARISHADS)**

(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	29,076	66,200	46,407	1,57,862	3,20,535

Source - Public Works Department, GoM

* 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'.

ANNEXURE 9.3

**CLASSIFICATION OF DISTRICT-WISE ROAD LENGTH ACCORDING TO BREADTH
(MAINTAINED BY PUBLIC WORKS DEPARTMENT)**

(km)

Sr. No.	District	Achievement in Length 2019-20					Achievement in Length 2020-21*				
		Breadth (mt.)	7.0	5.5	3.75	Other	Total	7.0	5.5	3.75	Other
(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	398	253	1,221	2,466	4,338	493	284	1,132	2,489	4,398
3	Palghar	550	492	1,655	4,350	7,046	573	516	1,651	4,323	7,063
4	Raigad	862	1,592	905	2,470	5,829	773	1,570	912	2,470	5,726
5	Ratnagiri	533	859	8,360	227	9,979	488	901	8,332	211	9,932
6	Sindhudurg	197	961	3,475	3,433	8,066	200	822	3,581	3,433	8,036
	Konkan Division	2,588	4,157	15,615	12,947	35,307	2,577	4,093	15,608	12,927	35,204
7	Ahmednagar	1,600	1,392	9,279	3,379	15,650	1,522	1,287	10,549	7,581	20,939
8	Nashik	1,525	1,748	9,728	6,682	19,683	1,473	1,816	10,813	5,365	19,467
9	Dhule	947	519	4,221	77	5,765	955	473	5,381	157	6,966
10	Nandurbar	366	514	4,497	78	5,455	344	480	6,218	57	7,099
11	Jalgaon	941	1,283	4,968	2,760	9,953	1,047	1,237	5,305	5,719	13,309
	Nashik Division	5,379	5,457	32,694	12,976	56,506	5,341	5,292	38,266	18,879	67,779
12	Pune	1,929	1,245	16,367	130	19,670	1,614	1,445	16,227	59	19,345
13	Satara	990	1,096	8,668	3,314	14,069	725	1,058	8,606	3,316	13,705
14	Sangli	865	1,070	4,253	6,138	12,326	1,500	998	4,225	6,145	12,869
15	Kolhapur	864	1,044	3,853	3,146	8,907	778	1,053	3,791	3,108	8,730
16	Solapur	1,613	989	10,225	4,964	17,790	1,790	838	5,384	9,567	17,579
	Pune Division	6,262	5,443	43,366	17,691	72,762	6,408	5,392	38,232	22,195	72,228
17	Aurangabad	858	833	6,721	1,888	10,300	880	813	6,721	1,888	10,302
18	Jalna	702	394	4,824	1,579	7,499	844	375	4,949	1,323	7,491
19	Parbhani	438	184	3,898	898	5,418	424	186	3,870	929	5,409
20	Hingoli	172	220	3,398	69	3,859	258	170	3,496	69	3,993
21	Nanded	1,088	667	7,805	2,137	11,697	1,123	719	7,840	2,330	12,012
22	Beed	1,089	435	8,252	2,589	12,365	1,153	435	8,252	2,594	12,434
23	Osmanabad	515	908	4,584	1,447	7,454	612	905	4,883	1,131	7,531
24	Latur	694	767	5,358	997	7,816	679	801	5,414	1,020	7,914
	Aurangabad Division	5,555	4,408	44,840	11,604	66,407	5,973	4,404	45,425	11,284	67,086
25	Buldhana	430	713	2,851	1,470	5,465	1,009	323	2,875	1,471	5,678
26	Akola	626	510	1,378	1,101	3,615	504	420	1,378	1,101	3,403
27	Washim	354	403	1,141	1,162	3,060	481	326	1,163	1,122	3,092
28	Amravati	649	927	1,856	4,682	8,114	842	829	1,769	4,682	8,122
29	Yavatmal	727	928	3,539	3,494	8,688	824	863	3,539	3,494	8,720
	Amravati Division	2,786	3,481	10,765	11,909	28,942	3,660	2,761	10,724	11,870	29,015
30	Wardha	444	518	1,803	2,534	5,299	308	313	3,587	3,224	7,432
31	Nagpur	1,082	645	6,354	6,584	14,666	558	418	1,803	2,533	5,313
32	Bhandara	348	246	2,859	2,769	6,221	1,057	642	6,395	6,495	14,589
33	Gondia	218	317	3,675	3,227	7,438	236	245	2,893	2,734	6,109
34	Chandrapur	312	612	5,942	2,618	9,484	712	482	5,942	2,618	9,754
35	Gadchiroli	422	746	4,622	520	6,310	502	498	4,455	569	6,025
	Nagpur Division	2,826	3,084	25,255	18,253	49,418	3,373	2,598	25,076	18,175	49,223
	Maharashtra State	25,396	26,030	1,72,536	85,379	3,09,342	27,332	24,541	1,73,331	95,331	3,20,535

Source - Public Works Department, GoM

* Provisional

ANNEXURE 9.4

CATEGORYWISE NUMBER OF MOTOR VEHICLES ON ROAD IN THE STATE

(As on 1st January)

Sr. No. (1)	Class of vehicles (2)	1971 (3)	1981 (4)	1991 (5)	2001 (6)	2011 (7)	2020 (8)	2021 (9)	2022* (10)
1	Motor-cycles, scooters & mopeds	83,930	3,46,826	16,96,157	44,09,906	1,20,60,990	2,77,11,430	2,83,40,408	2,99,46,065
2	Motor cars, Jeeps & Station wagons	1,22,508	2,24,752	4,23,505	9,01,278	23,82,789	52,36,377	53,88,475	58,18,042
3	Taxi cabs	17,806	31,302	43,168	86,438	1,82,676	3,71,429	3,73,237	3,64,061
4	Auto rickshaws	3,049	29,474	1,26,049	4,07,660	6,44,037	10,52,228	10,60,616	10,73,865
5	Stage carriages	10,250	13,789	18,203	27,286	34,061	40,335	40,482	41,908
6	Contract carriages	--	1,498	3,980	13,975	31,459	71,656	72,273	69,246
7	Lorries—						18,77,313	19,07,408	
	(i) Diesel engine	34,987	87,079	1,80,883	3,41,344	8,78,239	--	--	19,07,445
	(ii) Petrol engine	21,791	18,005	13,774	57,317	77,189	--	--	15,806
	(iii) Others (CNG, LPG, etc.)	--	--	--	NA	NA	--	--	85,156
	(iv) Electric	--	--	--	--	--	--	--	561
8	Ambulances	441	925	2,233	4,025	9,600	16,773	17,362	20,405
9	School buses	491	594	1,025	1,714	6,117	32,530	32,628	33,024
10	Private service vehicles	810	2,171	4,622	5,815	9,421	12,897	13,037	13,251
11	Trailers	7,075	23,173	60,858	1,67,856	2,84,696	4,25,259	4,32,412	4,53,385
12	Tractors	7,821	24,079	61,088	1,72,578	3,58,556	8,27,581	8,68,750	9,79,777
13	Others	810	1,319	5,040	9,872	29,829	85,785	89,159	94,501
	Total	3,11,769	8,04,986	26,40,585	66,07,064	1,69,89,659	3,77,61,593	3,86,36,247	4,09,16,498
	Motor vehicles per lakh of population	618	1,309	3,353	7,186	15,119	30,746	31,168	32,732
	Number of vehicles per km. road length maintained by PWD & ZP	5	6	15	31	71	122	125	128
	Ambulances per lakh of population	0.9	1.5	2.8	4.4	8.5	14	14	16

Source - Office of the Transport Commissioner, GoM

NA Not Available

* Provisional