



tumi
E-Bus Mission



Deep Dive City
Mumbai
India

ebus.transformative-mobility.org
[@TUMInitiative](https://twitter.com/TUMInitiative)
[@transformativemobility](https://facebook.com/transformativemobility)
[Transformative Urban Mobility Initiative](https://youtube.com/transformativeurbanmobility)

General Information about the City¹



Population

12.5 million (2011)
20 million (2021)



City area

603 km²



Average temperature

27 °C



Annual rainfall

2421 mm (annual)
230 mm (highest)



Renewable energy share (in MW) (MOSPI)

10.38%



Number of car ownership

248 private vehicles (2ws & 4ws) per 1,000 population



GDP (US Dollars)

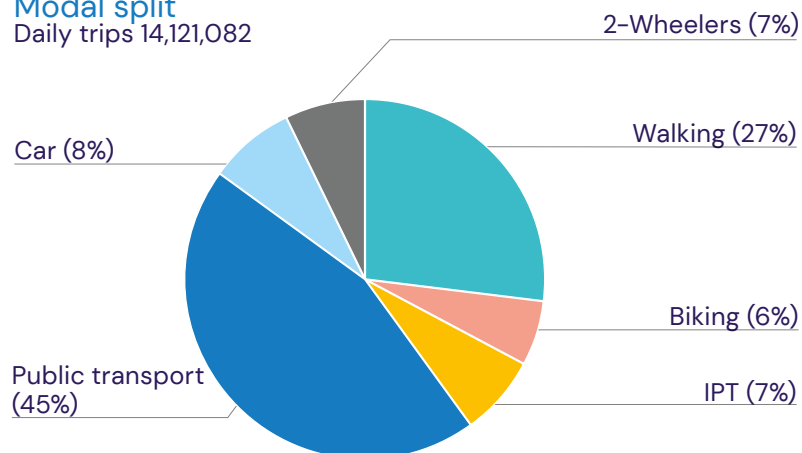
310 billion



Urban Mobility System²

Modal split

Daily trips 14,121,082



Public transport modes

Mumbai's share of public transport mode is the highest in India.

- City buses operated by Brihanmumbai Electric Supply and Transport (BEST) Undertaking
- Suburban Rail
- Monorail
- Metro
- Intermediate Public Transport (IPT): autorickshaw and taxis



Carried passengers (Avg. daily demand)

2.3 million

Total no. of routes

502

Avg. fleet age

10 years

Avg distance travelled per day by bus

210 km

Fleet utilisation

85%

Climate and Urban Mobility Policies



Vision for net zero urban mobility

Mumbai has set an ambitious target of achieving at least 10% electric vehicle (EV) penetration in the city by 2025. The city also aims to deploy 1,500 EV charging stations to address range anxiety among EV users. The vision is to reduce local emissions from public transportation and adopt sustainable bus operations by ensuring electrification of 50% of its fleet by 2024 and 100% electrification of the fleet by 2027 along with fleet augmentation to 10,000 public buses.

Experiences

Faster Adoption and Manufacturing of Electric and hybrid vehicles in India (FAME) I

- Mumbai deployed 46, 9 m e-buses. (40 under FAME scheme and 6 from city funds).

FAME II

- 2021: deployed 200, 9 m e-buses + 140, 12 m e-buses;

- Mumbai city has the largest e-bus fleet in India.

Procurement and planned projects

FAME I

- 40 (BYD Olectra);
- 20 – (9 m) Non AC, 20 – (9 m) AC + 6 (City funding) operational.

FAME II

- 340 (AC e-buses) of which 200 (9 m) and 140 (12 m);
- Issued tender for 2,100 e-buses and plans to transition their fleet in 1.5 years (2023);
- Plans to 898 ICE buses that have reached their end of operation life + replace them with e-buses.

References:

1. – <https://www.c4o.org/cities/rio-de-janeiro/>
– <https://cidades.ibge.gov.br/brasil/rj/rio-de-janeiro/panorama>
– <https://www.gov.br/infraestrutura/pt-br/assuntos/transito/conteudo-denatran/frota-de-veiculos-2021>

2. – <https://www.ebusradar.org/en/>

Electric Buses

Targets for electric bus adaption

- 1 2023: BEST set a target to procure 2,100 e-buses (1,900 single decker + 200 double decker e-buses).
- 2 2024: 50% electrification.
- 3 2027: Full electrification.

Business Model

BEST undertakes the major role of managing the e-bus network and the operator consortium (OEM + bus operators + energy service providers) manages the operation and maintenance of the e-buses. The operator consortium receives payment from BEST on passenger km travelled by e-buses.

Political Commitment

The city has developed the Mumbai Climate Action Plan (MCAP) with tangible goals to decarbonize the transport sector. The aim is to increase public transportation share via e-bus deployment and improved bus services. To provide improved accessibility, reliability, last-mile connectivity and clean mobility through public transport, MCAP aims to ensure e-mobility adoption and smooth transition for BEST.



25
Hybrid-Buses

3,240
ICE – Buses

386
E-Buses



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