

# Passenger transport mode

## Share of public transport, Electric and fuel cell vehicles

### Level 1

This level assumes that the share of rail and waterway remains at the same level till 2050, whereas share of air travel grows to 1.9% as more planned airports in smaller cities become operational and money value of time increases. Share of public transport is assumed to increase to 35% due to improved public transport services. Penetration of electric vehicles is assumed to be limited if there is a lack of focused policy initiatives, reaching 12% for 2wheelers, 3 wheelers and taxis, and 2% for buses and cars, reaching complete electrification in at least metro cities.

### Level 2

Level 2 envisages increased focus on rail based mass transport systems. Metro and suburban rail systems is being planned for Guwahati. Faster train sets will operate for inter-city rail passenger services, thus increasing intermodal share of rail to 15% by 2050. Demand for faster intercity travel would maintain civil aviation shares at about 1.8%, whereas share of waterway is expected to increase to 0.4%. This level also assumes that focused policy decisions by the government will incentivize and promote electric vehicles, thereby increasing the penetration of electric cars and 2 wheelers to 40%, 3-wheelers, taxis and buses to 99%, electric buses to 99% of the road based transport in 2050, buses on fuel cell engines to 1% and cars on fuel cell engines to 2%.

Share of road, rail, waterway and air travel in 2015 in Assam was estimated at 87 : 12.3 0.2 : 0.5 in percentage terms. The share of public transport (buses and omnibuses) was about 25%, of which ASTC buses were 8%, and the remaining were private vehicles (cars, 2,3-wheelers and taxis). Electric vehicles are yet to make a debut in the state, and with supportive policies they are expected to form significant share in the fuel mix in all categories of vehicles. Due to improvements in road infrastructure and increased penetration of private modes of road transport, railways have been losing share in the overall passenger traffic. Air travel in Assam is also expected to take off as Guwahati airport is developed as an Inter Regional Hub. Electrification of railways has recently begun, but faces challenges due to the hilly terrain of the state. About 15% of the railway track is expected to be electrified by 2020.

### Level 3

Level 3 assumes focused policies towards incentivizing suburban rail services, introduction of high-speed rail corridors and projects like Regional Rapid Transit System (RTTS) and more efficient ferry services results in increasing share of rail to 18%, waterway to 0.6%, reducing air to 1.5%. Improvements in public transport modes and is expected to increase its share in road transport to about 49% in 2050. Additionally, this level assumes further electric vehicle push, increasing penetration of electric cars to 52%, 2-wheelers to 56% in 2050, complete electrification of buses, 3 wheelers, taxis by 2040, with 2% of buses and 4% of cars on fuel cell engines in 2050.

### Level 4

Level 4 assumes the focus of government policies further enhance investments in rail based public transport like metros in all urban cities and Rapid Rail Transit Systems for all urban conglomerates. For inter-city travel, High Speed Rail at 300 km/hour for high demand passenger corridors will help reduce the incidence of air travel. Based on this, share for rail would increase to almost 19.3%, and air would reduce to 1.1%. Share of public road transport would increase to 55%. Transformative policy programs are envisaged which would achieve 100% electrification of buses, taxis and 3 wheelers in 2030, 87% of cars and 93% two wheelers by 2050, the remaining mainly on fuel cells and CNG.

