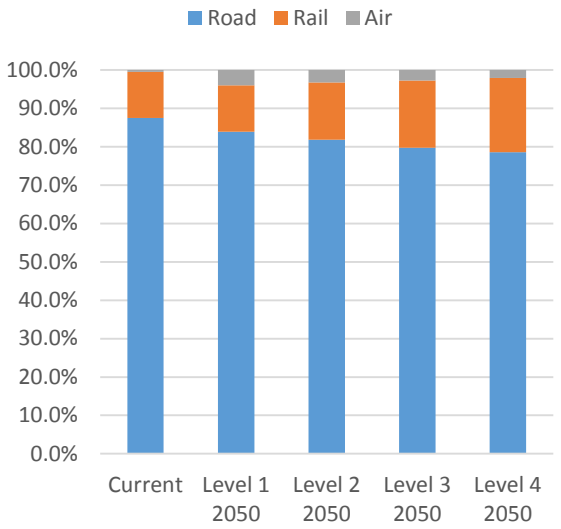
Passenger transport mode

Share of public transport, Electric and fuel cell vehicles

Share of road, rail and air travel in 2015 in AP was estimated at 87.5 : 12 : 0.5 in percentage terms. The share of public transport (buses and omnibuses) was about 57%, of which APSRTC buses form 33%, and the remaining were private vehicles (cars, 2,3-wheelers and taxis). Electric two wheelers have made a debut, and with supportive policies are expected to form significant share in the fuel mix in all categories of vehicles. 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 AP is also expected to take off with 3 new airports planned and PM's Udaan scheme. Electrification in railways is currently 34%, and is expected to increase rapidly. Electric vehicles can be a transformative change in the transport sector.

Level 1

This level assumes that the share of rail remains at the same level till 2050, whereas share of air travel grows to 4% as more planned airports in smaller cities become operational and money value of time increases. Share of public transport is assumed to fall to 42% due to increasing private vehicle ownership. 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 a focus on rail based mass transport systems. Metro and suburban rail systems could be extended to a number of urban centers (eg. Vijaywada (2020), Vishakhapatnam (2021) and Amravati (2021)). Faster train sets are likely to operate for inter-city rail passenger services, this could increase intermodal share of rail to 15% by 2050. Demand for faster intercity travel could maintain civil aviation shares at about 3.3%. This level also assumes that focused policy decisions by the government could 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 4%.

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 (RRTS), which could result in increasing share of rail to 18%, and reducing air to 2.7%. Incentivizing metro services could increase the share of public transportation in road based transport to about 65% in 2050. Additionally, this level assumes further electric vehicle push, increasing penetration of electric cars to 47%, 2-wheelers to 56% in 2050, complete electrification of buses, 3 wheelers, taxis by 2040, with 2% of buses and 9% 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 could help reduce the incidence of air travel. Based on this, share for rail would increase to almost 19.3%, and air would reduce to 2%. Share of public road transport could increase to 80% Transformative policy programs are envisaged which could achieve 100% electrification of buses, taxis and 3 wheelers in 2030, 82% of cars and 93% two wheelers by 2050, the remaining mainly on fuel cells and CNG.