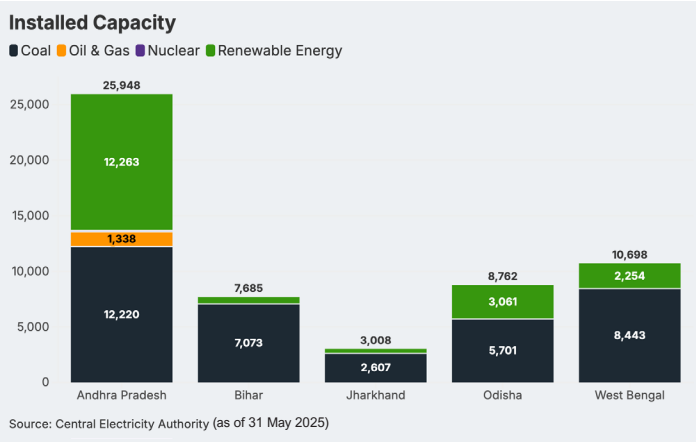
Institute for Energy Economics and Financial Analysis

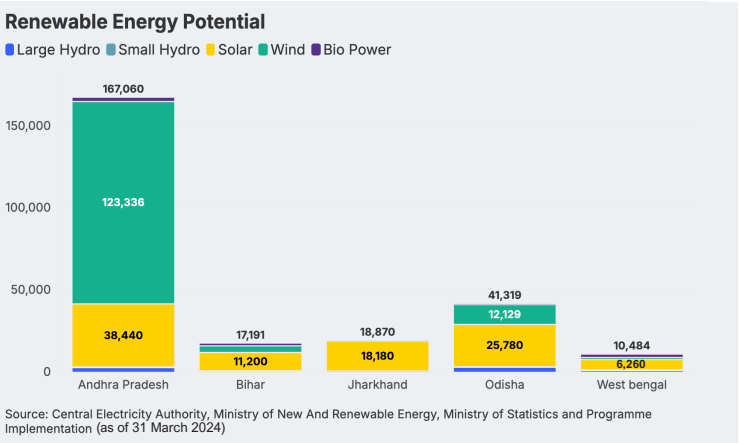
Fact Sheet

Strategic State Insights: Energy, Coal, Minerals

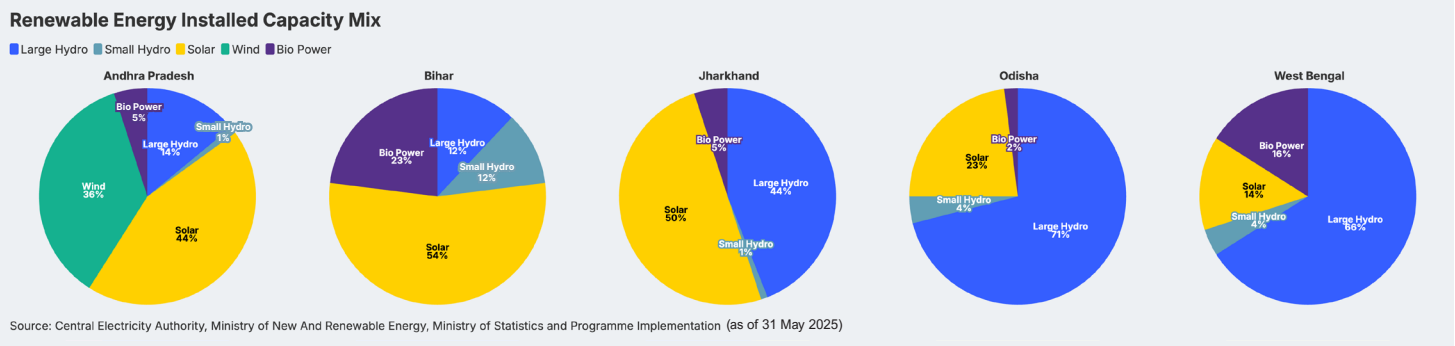
Energy

The energy landscape across Puvodaya states–**Andhra Pradesh, Bihar, Jharkhand, Odisha and West Bengal** reveals untapped potential, with significant variations in installed capacity, renewable energy uptake, and mineral resource endowments as per the data available till May 2025.

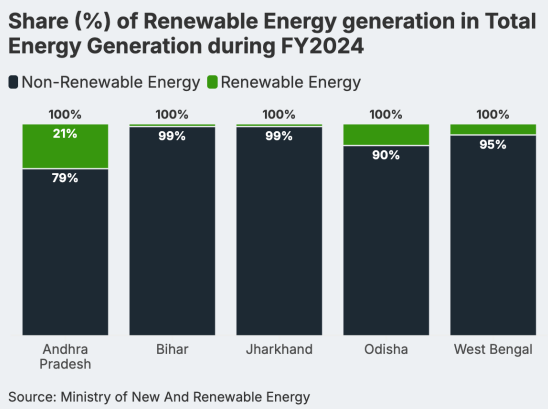


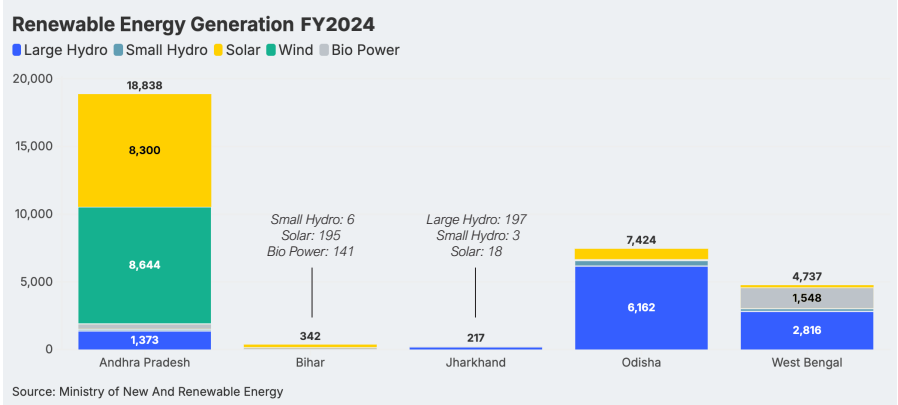


Andhra Pradesh has a total installed capacity of 25,948MW, with renewables accounting for nearly half. However, a significant portion of its renewable energy potential as of Fiscal Year (FY) 2024 remains untapped, with only 14% of its solar and 4% of wind potential utilised. Odisha has an installed capacity of 8,762MW, with a 35% renewable energy share and 77% of its large hydro potential operational. Odisha can also take steps to utilise its untapped solar potential (currently 3% utilisation).



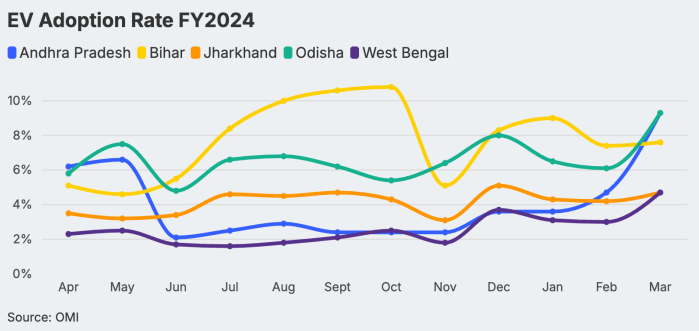
Bihar and Jharkhand have installed capacities of 7,685MW and 3,008MW, respectively. Their renewable energy share stands at 8% and 13%, with limited solar potential utilised—3% for Bihar and 1% for Jharkhand. West Bengal has an installed capacity of 1,069MW with renewable energy accounting for 21%.

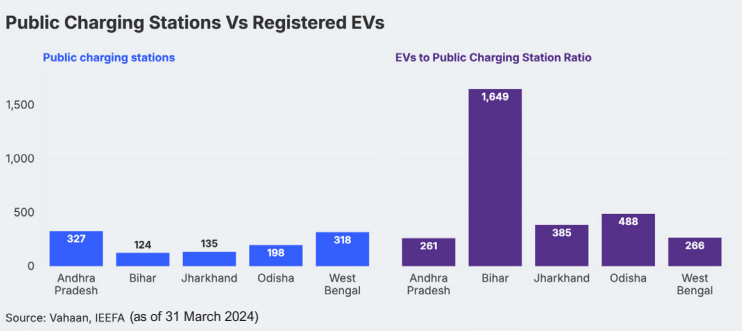




Despite large energy generation capacities, renewable energy occupies less than half the total share in most states' power generation mix. Andhra Pradesh has a 21% renewable energy share, driven largely by wind and solar. Odisha follows with 10%, backed by large hydro. Bihar and Jharkhand are highly fossil-dependent (99% non-renewable energy generation), while West Bengal has a modest renewable energy contribution (5%), primarily from bio power and large hydro sources.

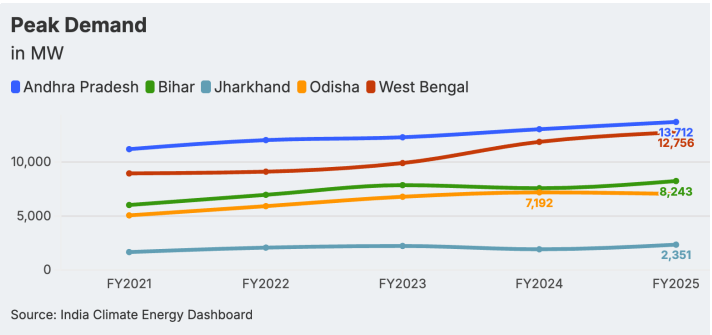
Electric Vehicle

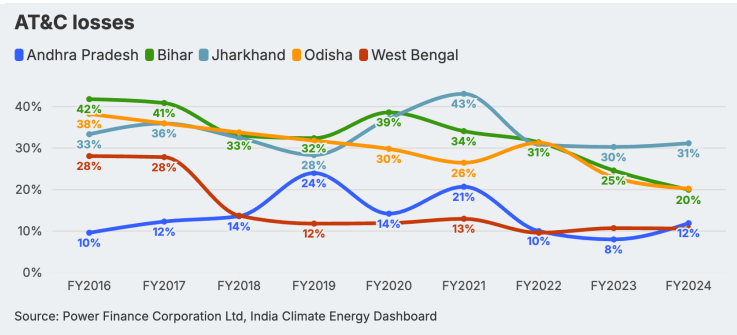




In FY2024, the EV adoption rate in Bihar was 7.7% and charging infrastructure was reportedly inadequate—approximately one charging station for 1,649 EVs. Odisha followed, with an adoption rate of 6.6%, accompanied by a moderately distributed charging network with one public charging station for 488 EVs as on 31 March 2024. Jharkhand and Andhra Pradesh both reported annual adoption rates of 4.1%. West Bengal's adoption rate stood at 2.6%, with one public charging station for 266 EVs.

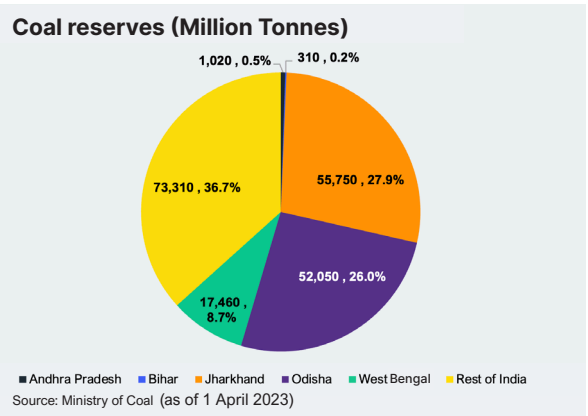
Peak Demand

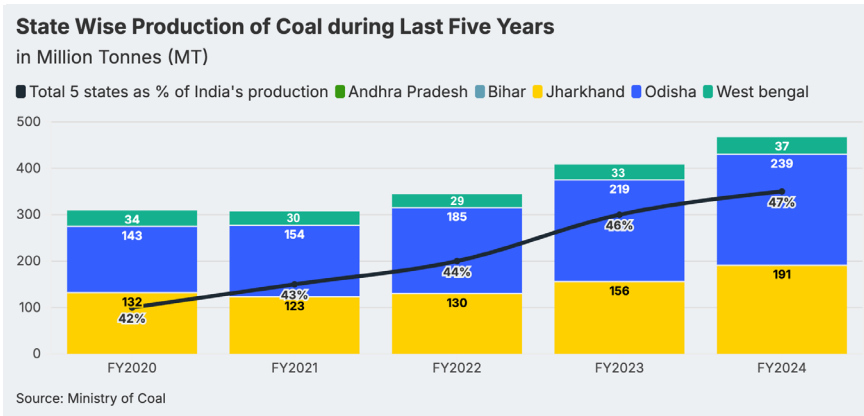


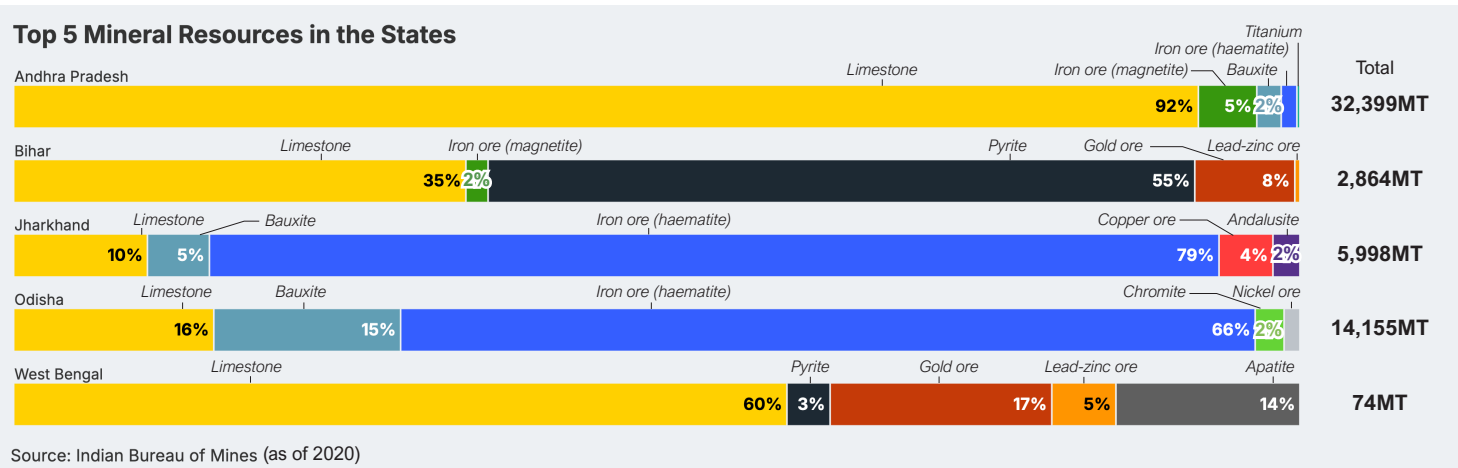


All five states recorded an increase in electricity demand from FY2021 to FY2025. In FY2025, Andhra Pradesh reached a peak demand of 13,712MW (May 2024), Bihar 8,243MW (September 2024), Jharkhand 2,351MW (July 2024), and West Bengal 12,756MW (April 2024). Odisha reached its highest demand in FY2024 at 7,192MW (April 2023). Seasonal peaks typically occurred during summer, reflecting increasing electricity needs, alongside growing consumption and economic activity. AT&C losses have steadily declined in Bihar, Odisha, and West Bengal, indicating improved distribution efficiency. However, Jharkhand faces persistently high loss levels, while Andhra Pradesh has reduced its AT&C losses since FY2021, reflecting improved distribution efficiency despite a small uptick in FY2024.

Coal







In FY2024, Odisha and Jharkhand contributed 24% and 19% of national coal output, respectively. Andhra Pradesh and Bihar, despite having reserves, reported no production. There is stark variation in mineral wealth. Odisha and Andhra Pradesh lead with large reserves of iron ore, bauxite, and limestone. Jharkhand has significant reserves of iron ore and copper, while Bihar and West Bengal have limited resources.

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