



# Approval for 100% Electrification of Broad Gauge Routes of Indian Railways

The Cabinet Committee on Economic Affairs (CCEA) has approved electrification of remaining un-electrified broad gauge (BG) routes of Indian Railways

- Presently around two thirds of freight and more than half of passenger traffic in Indian Railways moves on electric traction,
- However, electric traction accounts for just 37% of the total energy expenses of Indian Railways.
- Upon completion of electrification of the proposed routes, Indian Railways broad gauge network will be 100% operational on electric traction.
- This electrification is likely to be completed by 2021-22.

## Benefits

- Speed- 100% electrification will provide seamless train operation by eliminating detention of trains due to change in traction from diesel to electric and vice versa.
- Capacity- It will help Railways in enhancing line capacity due to higher speed & higher haulage capacity of electric locomotives.
- Safety- Improved signaling system will lead to enhanced safety in train operation
- Energy Security- As per new Auto Fuel Policy of the Government, total shift to electric traction will reduce fossil fuel consumption of about 2.83 billion liters per annum and also give a subsequent reduction in GHG emissions.
- Energy bill savings- It provides savings of Rs 13,510 crore per annum in fuel bill as maintenance of electric locomotive is low as compared to diesel locomotive. Regeneration facility of electric locomotives will save 15-20% energy; also there is reduced overall requirement of electric loco due to their higher horse power.
- Sustainability- Reduced carbon footprint as environmental cost per tonne Km for electric traction is 1.5 paise as compared to 5.1 paise diesel traction. In line with commitment made by India in COP21, total shift to electric traction will reduce CO2 emission of Railways by 24% till 2027-28. Green house gas emission for electric traction will fall below diesel traction by 2019-20 making it environmentally friendly option.
- Employment Generation - Direct employment during construction phase for about 20.4 crore Man days.

## Why it is needed?

- For plugging missing links and last mile connectivity.
- For managing seamless operation of rail traffic across the network,
- To remove bottlenecks created by the need to change traction.
- To enhance the line capacity and improve the average speed of trains.
- To improve operational efficiency and improve Railway Finances.
- To reduce environmental impact of Railways.

## Way Forward

The complete electrification of railway is poised to continue the growth story of Indian Railways. Through

the aforementioned benefits, complete electrification will act as a catalyst for the modernization process and deliver greater economic benefits. It will help Indian Railways become the growth engine of India.

PDF Refernece URL: <https://www.drishtias.com/printpdf/approval-for-100-electrification-of-broad-gauge-routes-of-indian-railways>

