

## Electrification of Railways

### Why in news?

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- Indian Railways (IR) is working on reducing fuel costs and carbon footprint through electrification of routes. The project is expected to be completed by 2021.

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### What is the plan of the project?

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- Earlier it was targeted to electrify 18,000 route kilometres (rkm) by the year 2020.

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- By the action plan of November 2016 the target is raised 24,000 rkm by 2021 that is to cover 6,000 km every year.

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- For accelerated execution, electrification projects are being funded under EBR (institutional finance of Germany).

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- Also, IR has joined hands with three public sector undertakings — IRCON, RITES and PGCIL — and expects to reduce its fuel bill by Rs 10,000 crore annually through electrification of major routes.

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- Electrifications also involves two dedicated freight corridors (DFCs) on which work is currently underway will both sport electrified lines.

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1. The Western DFC will cover 1,504 km of.

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2. The Eastern DFC will cover a route length of 1,856 km.

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## **What are the reasons for electrification?**

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- Electric traction is much cheaper and efficient compared with diesel traction.  
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- Running trains on electric traction is 50 per cent cheaper than diesel.  
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- Electric multiple units (EMUs) are ideal for suburban services, which require higher acceleration and braking features for frequent starts and stops.  
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- For seamless movement, modernisation in areas such as signalling and telecom.  
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- To reduce the carbon footprint.  
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## **What are the advantages of electrifying railways?**

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- The speed and throughput are better owing to faster speeds.  
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- Rate of return on capital is very high when compared to conventional engines.  
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- Lower operational and maintenance cost.  
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- Reduction in foreign exchange expenditure, due to zero fuel usage.  
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- Use of technology, like rail wire for providing internet.  
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## **Way forward:**

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- According to reports of CRISIL a risk analysis company, the ramp-up would be slightly slower as contractors would need some time to scale up.  
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- Also, the upward bias to electrification outlook is subject to availability of electric locomotive capacity and funds, since it involves Rs 1.2 crore per km and.

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- Electrification is strictly important as India is a signatory of UNFCCC for reducing the carbon emissions, this initiative is highly welcomed.

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- Indian government instead of planning in introduction of bullet trains can concentrate more on upgrading the present railway system to global standards.

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\n**Source: Indian express**

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