By Accelerating Renewable Energy Deployment in Railways
Conserving Now, Preserving Future

By
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ABOUT REMCL

- Railway Energy Management Company (REMCL), a Joint Venture of Indian Railways & RITES LTD., has been incorporated to focus:
  - Faster deployment of Renewable Energy over Indian Railways
  - Planning & execution of Renewable energy Projects
  - Overall Power Planning and its Procurement.
  - Capacity Building to IR personnel on green energy.
  - Advisory on Regulatory matters.
KEY STATISTICS

- Indian Railways (IR) annual consumption - 18 Billion kWh
- Annual electricity bill - 1.5 Billion US$
- Power Requirement - 2500 MW
- Average annual Growth rate - 5%
- Electrification Target - 25,000 RKM (next 5 years)
VISION TO REDUCE CARBON FOOTPRINT

- To substitute fossil fuel based power requirement with renewable energy
- To harness 1000 MW Solar power by 2020.
- To harness 200 MW wind power by 2020.
- To electrify 25,000 Route Kilometres of Railway Track over next 5 years
- To use renewable power up to 25% for traction use
- To reduce energy intensity by using energy efficient luminaries & appliances
- To improve Specific Energy Consumption by extensive use of 3 phase technology with regenerative braking in Electric rolling stock.
ROAD MAP – SOLAR ENERGY

Solar Roof Top Projects- Target 500 MW by 2020
At Railway Stations, Office buildings, Hospitals

- 25 MW commissioned
- 115 MW work in progress
- 32 MW tender invited
- 328 MW sites under identification

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Lower CO₂ Emission

0.2 Million Tons per annum (Existing Plants)

0.5 Million Tons per annum (Future)

Solar Roof top Plant
Ground Based Solar Projects: Target 500 MW

Proposal to harness in Railway land/ State Solar park

- 50 MW in Chhattisgarh in Railway land
- 50 MW in Solar Park in Rajasthan
- 400 MW Centralized/Distributed State-wise

Lower CO₂ Emission
0.54 Million Tons per annum (Expected)

Solar Ground Mounted Plant
ROAD MAP – WIND ENERGY

Wind Energy Projects- Target 200 MW by 2020

- 36.5 MW commissioned
- 16.5 MW under Award
- 147 MW being planned

Lower CO₂ Emission

0.32 Million Tons per annum (Future)

26 MW wind Mill Plant at Jaisalmer, Rajasthan

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CHALLENGES

- Scheduling of renewable energy
- Power balancing issues
- Non-banking of renewable energy limiting use of renewable energy
- High transmission charges of full installed capacity.
- Higher landed tariff even with lower ex-bus cost.
THANK YOU