

The UIC International Sustainable Railway Awards (ISRA) recognise and honour key stakeholders in the railway sector who are leading innovation in social ('people'), environmental ('planet'), and economic ('prosperity') sustainability.

The awards showcase transformative work from stations to trains, from economic resilience to emergency pandemic response, from social outreach to supporting the local environment.

The gala ceremony for The UIC International Sustainable Railway Awards took place on 1 June 2022 at Radisson Collection Hotel, Berlin, Germany.



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THE UIC INTERNATIONAL SUSTAINABLE RAILWAY AWARDS 2022



This poster provides information about the ISRA 2022 winner in the category "PLANET" "Best Use of Zero-Carbon Technology"

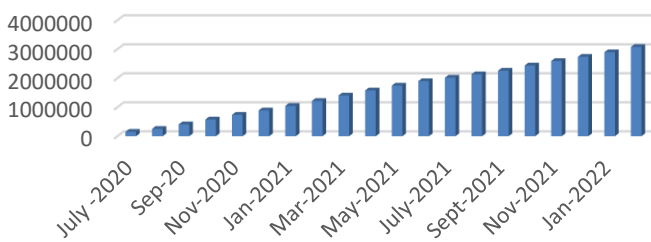
INDIAN RAILWAYS – BINA SOLAR PLANT

Targeting Carbon Neutral by 2030

- Commissioned in 2020, IR has provided 2x 865 kw solar plants, located near one of the traction substations
- The project is successfully running and it is tested and connected to the rail grid, to be utilized by running trains.
- The vacant land near railway tracks can be utilised for providing solar panels and will enhance safety using it as solar fence.

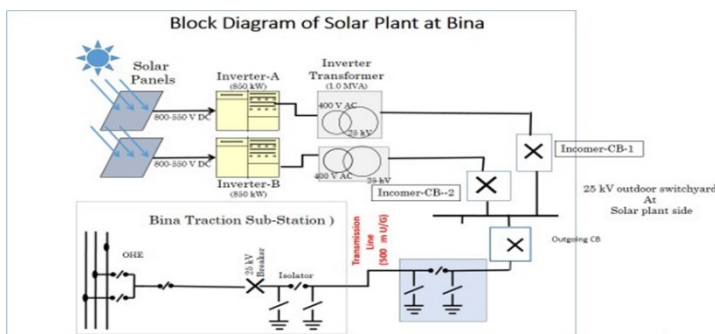


Cumulative Energy Generation (kWh)



Indian Railways has 51000 hectare of vacant land with the potential for solar generation estimated to be 20 GW

Overcoming Technical Challenges



The main challenge was to design and develop a single-phase inverter as all inverters available on the market are three phase inverters. It is the first time worldwide, that a 1.7 mw plant of such a large capacity is connected to rail overhead line system:

The power produced is totally green and it provides power to the rail grid during solar hours. The protection and safety have been ensured and all monitoring parameters are controlled digitally through Rail SCADA (Supervisory control and Data

Acquisition System).

Keywords: Zero-Carbon Technology, Solar Plants, renewable energy

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