**GOVERNMENT OF INDIA**
**MINISTRY OF RAILWAYS**
**(RAILWAY BOARD)**

**No. 2009/Elect(G)/150/9** **Dated 02.06.09**

The General Managers,
All Indian Railways and PUs
Metro Rail, Kolkata,
CORE, Allhabad

Director General
RDSO, Lucknow,
RSC, Vadodara,
Director, IRIEEN, Nasik Road, Nasik,
Managing Directors,
RITES, Gurgaon, Block No. 1, Sec. 29 (HR)
IRCON, Saket, C-4 Distt. Centre ND-17,
CONCOR, Northern Region, Inland Container Depot, Tughlakabad, New Delhi,
CRIS, Chanykaya Puri,New Delhi,
RVNL, Plot No. 25,, 1st block August Kranti Bhawan, Bhikaji Cama Place, New Delhi,
DFCCIL, 5th floor, Pragati Maidan, Metro station Building complex, New Delhi.

**Sub: Provision of solar based panel sheets as a energy conservation measure on sheds, coaching depots, workshops, etc. on Indian Railways.**

The non traction energy constitutes 20% of energy consumption on IR. The electrical energy consumed in workshops, loco sheds, coaching depots accounts for 20-25% energy consumption on IR.

2.0 The traffic growth witnessed during Xth Plan has been 8-9% and it is pegged as 8-9% during XIth Plan.

3.0 The maintenance activities in workshops, sheds, coaching depot need to be upgraded and created to meet the anticipated growth. During XI th Plan.

4.0 Thus electrical energy need will also increase during XI th Plan In order to offset increased energy demand it is imperative that some of the electrical energy shall be generated from renewable energy source. The document on National Action Plan on Climate Change has been recently unveiled by Prime Minister council change where one of the mission proposed is National Solar mission. All the coaching depots, sheds and workshop have huge roof top of asbestos sheets Some of sheets can be replaced by thin film of PV(photo voltaic) integrated roof top to improve day light and it can also be used to produce electricity for some of the important load such as lighting load.

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5.0 Solar Energy, one of the renewable sources of energy, has been the focus of development for the last 10 years. The conversion efficiency of photovoltaic(PV) cells has increased with the advancement of technology. The use of renewable energy sources and energy conservation over IR can be achieved by adopting solar based system for lighting, emergency power and heating system.. This is the green energy which can be harnessed on Railways for major stations and other areas like loco sheds, coaching depots, workshops, etc. on Indian Railways.

6.0 With this backdrop in mind Zonal Railways are advised that all new construction and during capacity enhancement work of sheds, workshops, coaching depots shall have mandatory provision of roof top PV integrated roof top to cater lighting load. RDSO shall frame specification.

***This is issued with the approval of Board (ML)***

**(R.K.Jain)**
**Director Electrical Engg. (PS)**
**Railway Board.**

Copy to the following for information and necessary action

1. Chief Electrical Engineers, All Indian Railways and PUs.
2. Chief Electrical Engineer, COFMOW, Tilak Bridge, New Delhi.
3. Chief Electrical Engineer, Konkan Railway, Plot No. 11, CBD, Belapur Bhawan, Navi Mumbai
4. CAOs, All Indian Railway.
5. ED(EM), RDSO, Lucknow for information and necessary action.