



पश्चिम रेलवे



International Seminar
On

Wind Energy – Opportunities in Rail Sector



Friday, 20th November 2015

Y. B. Chavan Auditorium,
Mumbai, India.

Organised by
Western Railway
Mumbai Rail Vikas Corporation Limited
Under the aegis of
United Nations Development Programme-GEF



Eminent speakers from
Government, Industry leaders,
Financial Institutions, Research
Institutions, Project integrators,
Energy economist, Practising
renewable energy experts

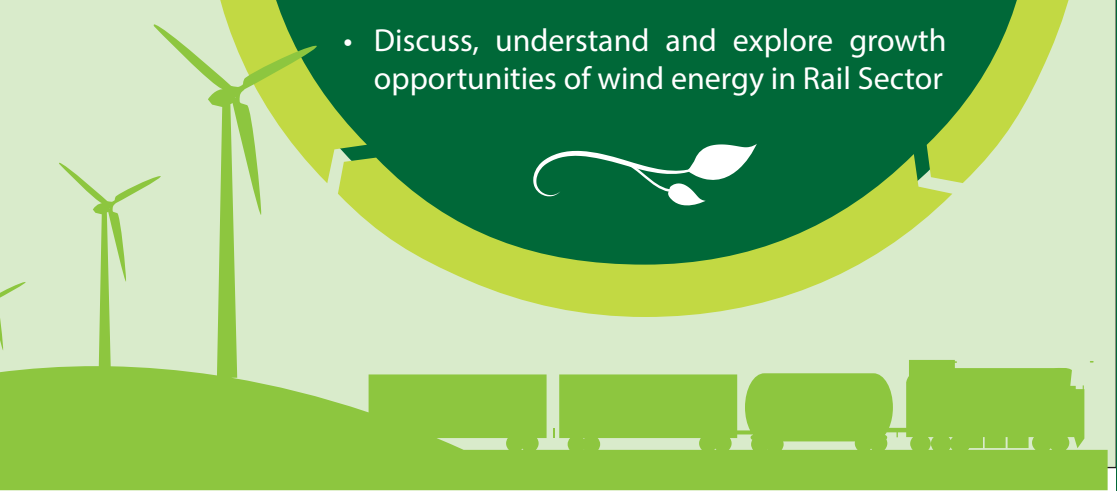


Energy is an important building block in human development and acts as a key factor in determining economic development of the country. For sustained economic growth, long term availability of adequate energy at affordable cost is crucial. Major share of energy produced is based on coal, oil and natural gas. Use of these fuels gives rise to GHG emissions and sustainability issues. India's substantial and sustained economic growth is placing enormous demand on its energy resources. As more than two third of energy produced is also based on coal and oil, increased energy demand will increase the requirement of coal and oil in future. India imports more than 70% of its oil. This percentage is expected to increase further. The role of renewable energy has been assuming increasing significance in recent times, with the growing concern for the country's energy security. Renewable energy is seen as an opportunity to supplement energy needs of future in a sustainable manner. Indian Govt's vision is for getting 175 GW of clean energy by 2022. India is set to become the world's largest clean energy market. Innovative solutions from industry and research institutions are required to achieve this vision. Amongst the renewable sources wind energy has the largest share of installed capacity. Globally wind energy accounts for half of growth of all renewable sources. India has a large estimated potential of 100GW (at 80 mts height) of wind energy along 7500km of coastline. India is the 5th largest wind power producer in the world's installed capacity, contributing to 65% of total installed capacity of all renewable sources. Indian Railways consumes about 4000MW of power and annually spends ₹12,000 Cr on electricity charges, majority produced by non renewable sources. The power requirement is expected to rise to 20000MW by 2030. Power becomes the main driver for increased capacity addition in Indian Railways (IR). Wind energy penetration in IR will aid in achieving this goal in a sustainable manner.



Seminar objectives

- Wind power: Key to future sustainability
- Learn and share experience of International, National, Industry leaders, Research institutions on implementation of Wind Energy Projects in Rail Sector
- New technologies and innovative solutions for successful Wind Energy use in Rail Sector
- Discuss, understand and explore growth opportunities of wind energy in Rail Sector



PROGRAMME OUTLINE

TIME	EVENT DAY
10.00 to 11.00 hrs	YBC Auditorium, Mumbai
	Inaugural Session Chief Guest - Shri Suresh Prabhakar Prabhu <i>Hon'ble Minister of Railways</i>
	Guest of Honour- Shri Manoj Sinha <i>Hon'ble Minister of State for Railways</i>
11.00 to 11.30 hrs	Tea
11.30 to 13.00 hrs	Technical Session –I
13.00 to 14.00 hrs	Lunch
14.00 to 15.30 hrs	Technical Session –II
15.30 to 15.45 hrs	Tea
15.45 to 17.00 hrs	Technical Session –III
17.00 to 17.30 hrs	Valedictory Session



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|--|--------------------------|
| 1 Pitch drives | 7 Disk brakes |
| 2 Rotor that connects blades to main shaft | 8 Brake hydraulic system |
| 3 Main shaft | 9 Generator |
| 4 Main bearing | 10 Main hydraulic system |
| 5 Gearbox | 11 Nacelle frame |
| 6 Yaw drive | 12 Yaw brakes |

ORGANISERS



Western Railway

Western Railway, one of the zones of Indian Railways, is among the busiest railway networks in India.

Western Railway serves parts of Maharashtra, almost entire Gujarat and parts of Madhya Pradesh and Rajasthan. Western Railway now comprises of six divisions viz Mumbai, Vadodara, Ahmedabad, Ratlam, Rajkot and Bhavnagar.

Western Railway serves a number of ports on the western coast of India, important being Kandla, Mundra, Navlakhi, Dahej & Pipavav.



Mumbai Rail Vikas Corporation Limited

Mumbai Railway Vikas Corporation Ltd (MRVC Ltd) is a Public Sector Undertaking of Govt. of India under Ministry of Railways (MoR), incorporated under Companies Act, 1956 on 12th July 1999. MRVC is responsible to execute the projects under Mumbai Urban Transport Project (MUTP) as sanctioned by Ministry of Railways. It is executing a number of suburban rail improvement projects for enhancing suburban rail transportation capacity.



United Nations Development Programme – GEF

UNDP partners with governments and people to help build nations and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in more than 170 countries, UNDP offers global perspective and local insight and provides technical assistance, policy advice and development support services using flexible implementation modalities.

UNDP in India is committed to promoting low carbon, climate resilient and inclusive development.

TECHNICAL PAPERS ARE INVITED ON FOLLOWING SUB THEMES

- (i) Technological alternatives/ opportunities available for wind energy in rail sector
- (ii) Emerging technologies on wind energy
- (iii) Grid interactive and off grid application of wind energy in rail sector
- (iv) Policy direction, Regulations for sustaining wind energy projects. Formulation of Conductive regulations of regulatory commission (CERC, SERC) in support of government policy.
- (v) Impact of government incentives – financial regulatory frame work
- (vi) Implementation alternatives of wind energy projects in IR. Business model and financing strategy for higher penetration of wind energy projects on Indian Railways
- (vii) Best practices / successful implementation of wind energy project in rail sector

GUIDELINES FOR PREPARING THE PAPER

- The paper should be typed in A4 size with 25 mm margin on all sides in MS-word document with single line spacing with font: Times New Roman, size12.
- The author's name, designation and organization are to be mentioned below the title. An Abstract of the paper may be provided in Times New Roman, size 10, italics.
- All figures, annexures, exhibits etc. are to be indexed and references are to be clearly indicated in the body of the text.
- The maximum length of the paper is to be limited to 6 pages.
- One hard copy of the paper is to be submitted along with a soft copy on a CD. The soft copy may also be submitted through e-mail in advance.
- A brief resume of the author(s) not exceeding 200 words and a Passport size photograph should be enclosed along with the paper. Author/ presenter of paper which are shortlisted for presentation during the seminar are requested to bring the same in presentation format.

Registration of Delegates (Participation Free)

Registration will start at the venue from 09.00 hrs on 20th November, 2015

For further details please contact

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