



9.0 ENERGY CONSERVATION:

9.1 Power and Fuel Consumption:

Sl. No.	Particulars	Unit	2024-25	2023-24
I.	Electricity Purchased			
a.	Purchased Units	M.KWH	867.65	835.42
b.	Total amount paid to the supply agencies (Approx.)	Rs. in Crore	642.27	610.05
c.	Rate/Unit (Average)	Rs. / KWH	7.40	7.30
d.	Specific Consumption of Electricity (Approx.)	KWH/Cum	3.71	4.04
II.	Demand of Power			
a.	Average demand of power	MVA	179.59	178.84
b.	Contract Demand	MVA	207.40	199.33
c.	% Utilisation	%	86.59	89.72

9.2 Energy Conservation:

In order to implement energy efficiency measures in different units and establishments, steps have been taken to replace 813 conventional fans with BLDC Fans (Super Fans), 127 old ACs with energy-efficient ACs, 1570 conventional lights with LED Lights and 120 old motors with energy-efficient motors. The total anticipated savings from these energy efficiency measures is about 1.1 Million Units, valued at Rs. 7.763 Crore (approximately) during year 2024-25, which resulted in a reduction of CO₂ emissions by 1975 Te. Net Gain received from improvement of Power Factor during the F.Y. 2024-25 is Rs. 10.83 Crore.



Tricycle Distribution under CSR Initiatives of Sonepur Bazari Area by Shri G. Kishan Reddy, Hon'ble Minister of Coal & Mines, Govt. of India

9.3 Underground Machinery Performance:

Equipment	2024-25		2023-24	
	On Roll	Productivity (TPD)	On Roll	Productivity (TPD)
SDL	183	63	225	70
LHD	28	78	33	88
Continuous Miner	12	1211	11	1310
Road Header	-	-	1	44
Longwall	1	539	1	1802
Highwall	2	1058	2	1204

9.4 Performance of CHPs:

As on 31st March, 2025, the two Major CHPs at Sonepur Bazari and Rajmahal handled 24.46 MT of coal in F.Y. 2024-25 in comparison to 21.05 MT of coal during the year 2023-24.

9.5 Major achievements during 2024-25:

- ECL has issued work order for diversion of 132 kV Tower of DVC to ensure the continuity of mining operation of North Searsole Mine.
- Work order has been issued for the supply and installation of 9 nos. of Road Weighbridges in order to comply 100% both side weightment criteria.
- Installation and commissioning of 3.73 MW Roof Top Solar Plant in ECL is under progress and 850 kW has been commissioned in F.Y. 2024-25 out of 3.732 MW Roof top solar plant.



Silo Loading System at Rajmahal Area of ECL



9.6 Solar Power Initiatives in ECL:

The ever-increasing global concern over climate change has prompted a shift towards sustainable and eco-friendly energy sources. Among the various renewable energy options, solar power stands out as a shining example of how innovation and technology can make a significant impact on reducing carbon emissions. As the world grapples with the challenges of climate change, the adoption of renewable energy sources becomes paramount in curbing carbon emissions. Among them, solar power has emerged as a shining beacon of hope in the fight against global warming. With the capacity to significantly reduce carbon dioxide (CO₂) emissions, solar energy is equivalent to planting hundreds of trees over the span of decades. In this blog, we explore the remarkable impact of solar power in reducing CO₂ emissions and its equivalent contribution to tree planting.

Coal India Limited has already instructed to all its subsidiaries with directives to prepare the modalities / action plan for becoming Net Zero Company. Coal India Limited has communicated that to become a Net Zero Company, ECL has to install 525 MW Solar Power Project. Subsequently, ECL has taken initiatives to install Solar Power Projects in its area of operation. ECL has installed 1.906 MW Solar Power Project upto the F.Y. 2023-24 which has generated 8.47 Lakh kWh power resulted in saving of Rs. 42.72 Lakh and has installed 2.756 MW Solar Power Project upto the F.Y. 2024-25 which has generated 12.55 Lakh kWh power during the F.Y. 2024-25 resulted in saving of Rs. 63.79 Lakh.

ECL has planned to implement following Solar Power Projects during the F.Y. 2024-25:

- a) **Ground Mounted Solar Plant of 35 MWp capacity:** The work for installation of Solar Power Plant at all the three sites is in progress and expected to be commissioned by June, 2025.
- b) **Roof Top Solar Plant of 3732 kWp capacity:** The work for installation of 3732 kWp Roof Top Mounted Solar Plant is in progress and expected to be commissioned by September, 2025.
- c) **Floating Solar Plant of 5 MWp capacity:** The project for 5 MW Floating Solar Plant at Salanpur Area is in process of award of work.
- d) **Ground Mounted Solar Plant of 5 MWp capacity:** The project for 5 MW Ground Mounted Solar Plant at Sonepur Bazari Area is under NIT preparation phase.



35 KWp Roof Top Solar Panel, Jhanjra