Impact Assessment - Renewable Energy

March 2025

Transition to renewable energy has been one of the big projects that Wipro has taken up. An impact assessment study was taken up to assess the impact on GHG emissions, air pollution, water & land. In FY25, Wipro procured ~81 million units of energy through the vendors in the states of Tamil Nadu, Karnataka and Uttar Pradesh.

Present study showcases the impacts of Wipro's renewable energy procurement as compared to the hard coal-based electricity generation. Operational impacts of renewable energy generation can be insignificant but not that of the upstream supply chain. Therefore, to have a fair comparison between renewable vs traditional coal-based electricity generation, a life cycle-based approach has been used. This approach considers the impact of production, transports, installation, operation phases of the electricity generation along with various technology mixes available in the respective markets.

At the site level from where the power was procured, there was little or no displacement of any significant natural resources because in case of wind power through RS Yarns (which is a power aggregator and supplier), the towers are installed in areas that are not part of any designated forest cover by law and also, they did not hinder the pathway of any wild animals.

In case of solar power, Avaada is bordered to a reserve forest, however there are no endangered flora or fauna. They also have their own borewells on site along with rainwater harvesting. Hero Future Energy has implemented a waste management programme, covering compliance.

Below are the quantities saved as a result of the RE transition:

Quantities savings	2023	2024	2025
GHG Emissions (tonne)	92,499	95,511	87,609.02
Air Pollution- PM	151	155	142.42
Air Pollution- SOx	496	510	467.56
Air Pollution- NOx	393	404	369.91
Water Consumption (m^3)	25,26,352	26,16,381	24,01,600
Land Use Change (m^2)	-2,82,653	-1,99,267	-1,53,575

The Impact savings in dollar amount is given below:

Impact savings (USD)	2023	2024	2025
GHG Emissions	98,00,000	1,10,00,000	1,10,00,000
Air Pollution	13,00,000	15,00,000	14,00,000
Water Consumption	8,46,458	9,10,000	8,80,000
Water and Land Pollution	7,100	14,000	15,000
Land Use Change	-27,00,000	-20,00,000	-16,00,000
Total savings	93,00,000	1,10,00,000	1,20,00,000
Solar unit	6,80,00,000	5,20,00,000	4,10,00,000
Wind Units	1,70,00,000	3,00,00,000	3,80,00,000
Hydel Units	-	53,00,000	-
Total units	8,50,00,000	8,70,00,000	8,00,00,000
Saving (USD/kWh)	0.109	0.126	0.15

All the quantities are converted in terms of dollar values using GIST Impact valuation methodology. Nationalised social cost of carbon is used to keep consistency with EP&L results published by Wipro. For other pollutants, country average LCA models and valuation coefficients are used. Impact due to air pollution and water & land pollution includes negative health impacts of the various toxic pollutants (organic/inorganic/ heavy metal) released in respective compartments. Land use change impacts are calculated based on the land transformation numbers.

Calculations showcase the total impact saving of USD 12 million in FY25. Greenhouse gas savings of 87,609 tonnes was achieved through the RE procurement of 81 million units. Water consumption savings are 2.4 million m^3 which translates into a savings of USD 0.88 million. As renewable energy generation requires more land, the impact due to land use is generating a negative externality of USD 1.6 million.

Based upon the impact assessment, the Corporate Social Responsibility (CSR) Initiative with respect to procurement of renewable energy, the impact on the environment was found to be **"Highly Positive".**

For Gist Advisory Pvt. Ltd.

Authorised Signatory

GIST ADVISORY PVT. LTD.