

**Date:-August 07, 2024**

**To,**  
**Bombay Stock Exchange Limited**  
Phiroze Jeejeebhoy Towers,  
Dalal Street,  
Mumbai – 400001.

**Security Id:-Rudra**

**Scrip Code:- 539226**

**Subject** :- Comprehensive Planning on Renewable Energy Initiative;  
**Reference** :- Regulation 30 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

With reference to the subject cited above and in continuation of our previous intimation vide letter dated March 11, 2024, we hereby enclose the Comprehensive Planning on Renewable Energy Initiative

Yours sincerely  
Thank you  
For, **RUDRA GLOBAL INFRA PRODUCTS LIMITED**

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**Sahil Gupta**  
Director  
**DIN:- 02941599**

Encl.:- Details on Comprehensive Planning.



**ERUDRA GLOBAL INFRA PRODUCTS LTD.**



**SOLAR ENERGY**

FACILITATING GREEN STEEL 

## **SAFE HARBOUR STATEMENT**

**Statements in this presentation describing the Company's performance may be "forward looking statements" within the meaning of applicable securities laws and regulations. Actual results may differ materially from those directly or indirectly expressed, inferred or implied. Important factors that could make a difference to the Company's operations include, among others, economic conditions affecting demand/supply and price conditions in the domestic and overseas markets in which the Company operates, changes in or due to the environment, Government regulations, laws, statutes, judicial pronouncements and/or other incidental factors.**



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# HARNESSING SOLAR ENERGY IN THE STEEL INDUSTRY



## HARNESSING SOLAR ENERGY IN THE STEEL INDUSTRY

Harnessing solar energy in the steel industry presents a significant opportunity to reduce costs, lower environmental impact, and increase sustainability. Despite challenges, the benefits and future prospects make it a viable and attractive option for steel manufacturers worldwide.

Secondary emissions from electricity use can already be significantly reduced, with manufacturers around the globe starting to decarbonize this part of their operations using rooftop and on-site solar.

As the steel industry shifts toward electric furnaces and hydrogen fuel, solar will only become more important as an energy source in the context of steelmaking. To meet climate targets, both the energy used to produce hydrogen and to power electric arc furnaces must come from renewable sources – and solar is already the most cost-competitive.

India has the second-largest steel industry in the world and is the third-largest consumer of steel as per the World Steel Association. The steel industry is a huge market, especially in India. It is a major contributor to the Indian economy, contributing about 2% of GDP and employing around 2.6 million in steel and steel-associated industries.

India's steel consumption has risen by over 11%, 119 million tonnes in FY 2023, compared to 105 million tonnes in FY 2022. The steel and iron industry are the most energy-intensive sectors in the country accounting for more than 20% of the energy, as per the latest report released by ICRA.

The steel industry produces 1.4 tonnes of CO<sub>2</sub> per ton of steel produced. As our country progresses towards Net Zero by 2070, drastic changes should be made in industries like steel manufacturing to reduce the impact of carbon emissions from the industry.



# IMPORTANCE OF RENEWABLE ENERGY



## IMPORTANCE OF RENEWABLE ENERGY

Integrating solar energy into steel production involves a combination of onsite solar PV systems, smart grid technologies, and collaborative projects. These strategies not only reduce energy costs and carbon emissions but also enhance operational efficiency, energy security, and sustainability. By adopting solar energy, the steel industry can significantly contribute to global efforts to combat climate change and promote a cleaner, greener future.

Solar energy plays a crucial role in transforming the steel industry towards a more sustainable, cost effective and resilient future. By reducing energy costs, minimizing environmental impact, enhancing operational efficiency, and supporting corporate social responsibility, solar energy offers comprehensive benefits that align with the evolving demands and challenges of the steel industry.





# STEEL INDUSTRY'S ROLE IN SUSTAINABILITY

The steel industry's role in sustainability is crucial for achieving global environmental, economic, and social goals. By embracing sustainable practices, integrating renewable energy, improving efficiency, fostering innovation, and engaging with communities, the steel industry can significantly reduce its environmental impact and contribute to a more sustainable future.



# HOW SOLAR ENERGY CAN BENEFIT THE STEEL INDUSTRY



## HOW SOLAR ENERGY CAN BENEFIT THE STEEL INDUSTRY

### ► Economic Benefits

- **Reduction in energy costs :**

Once the initial investment in solar infrastructure is made, the operating costs are significantly lower compared to traditional energy. Also, businesses can safeguard themselves against any fluctuation in fossil fuel price, ensuring more stable energy costs over time.

- **Financial incentives :**

To promote adoption of renewable energy and make investment in renewable energy financially attractive, the Government often offers subsidies and tax credits to businesses. Also, loans for adoption of renewable energy are available at reduced rates of interest in the market.

### ► Environmental benefits

- **Reduction of green house gas emissions :**

Power constitutes a major portion of cost of production of steel. By replacing solar energy with fossil fuels, businesses and greatly reduce their green house gas emissions, and thereby their carbon footprint.

- **Sustainable resource utilisation :**

Solar energy being abundant and inexhaustible in nature not only provides a sustainable alternative but also helps in minimising environmental impact caused due to resource extraction and energy production.

### ► Operational efficiency

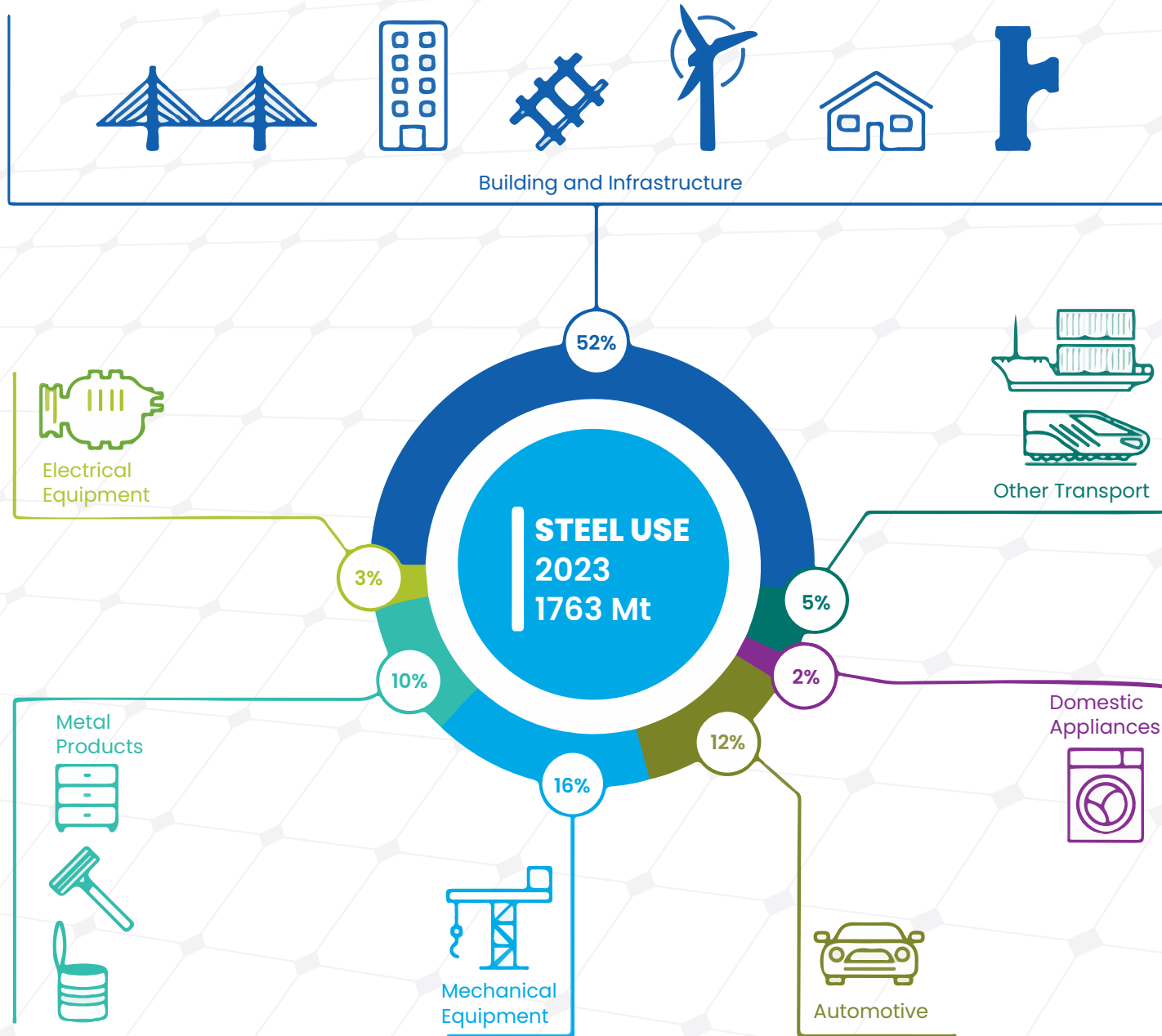
By achieving energy independence businesses can enhance their energy security and resilience of their business. Solar energy systems combined with energy storage solutions, can help ensure continuous operations even during grid disruptions or energy shortages.

### ► Social and corporate responsibility

Adopting solar energy aligns with broader corporate CSR initiatives, enhancing the company's reputation and stakeholder relations. Installing solar plants not only lead to job creation and support for local communities but also helps in improving air quality, benefiting the health of workers and surrounding communities with no need of handling and transporting fossil fuels, the overall workplace safety is improved.



# STEEL USE BY SECTOR



Data Source: [www.worldsteel.org](http://www.worldsteel.org)



# ENERGY INTENSITY IN STEEL INDUSTRIES



## ENERGY INTENSITY IN STEEL INDUSTRIES

One can easily assume the steel industry is a very energy-intensive business, and it is. According to estimates, to manufacture one ton of saleable steel approximately  $12.5 \times 10^6$  kcal has to be utilized as per Indian standards. By installing solar power system on their non-utilized spaces, such as the roof/ground, they will not only save energy costs but also contribute to a greener future.

Coal is the primary source of energy for this industry followed by electricity and natural gas. Although Coal is abundant and inexpensive, the quality of coal plays a huge part in the ease of operations in industries.

The energy sources used by industries to produce steel (in the year 2019)

Coal: 627Mtoe/ year

Oil: 10 Mtoe/ year

Gas: 21 Mtoe/ year

Electricity 106 Mtoe/ year

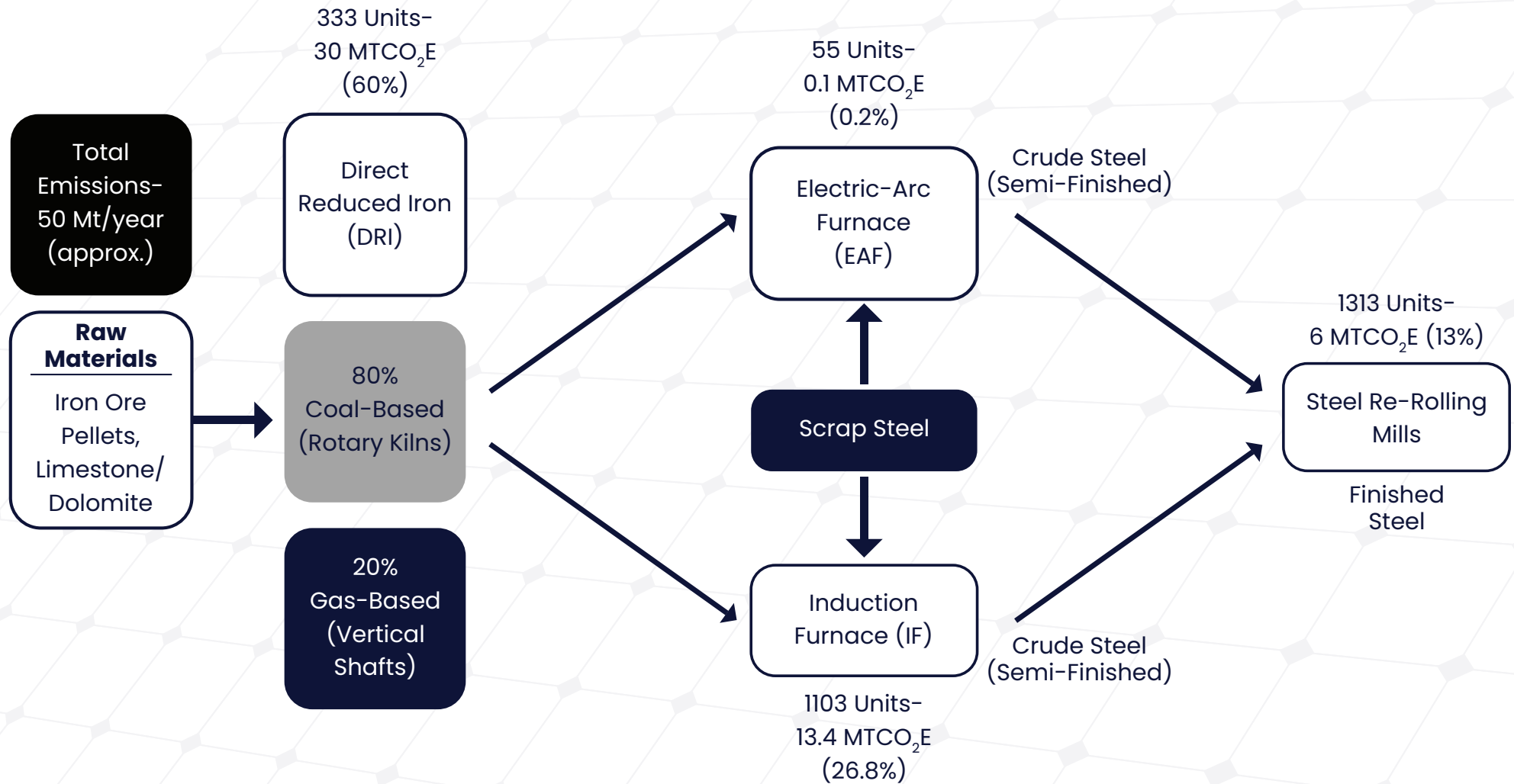
Imported Heat:14 Mtoe/ year

Bioenergy: 6 Mtoe/ year

India being a fast-growing nation, requires more steel to supplement its growth, especially for the infrastructure development of the country. The demand for steel has more than tripled since 1970, and as per the latest reports it has recorded a growth of 13% in the last fiscal year. With the predicted rise in demand for steel, the sector will need to ramp up its production and is expected to double its production capacity by 2031, which in turn will result in higher demand for energy.



# VALUE CHAIN AND GHG EMISSION OF THE SECONDARY STEEL SECTOR



Data Source: TERI & GIZ, 2022



# RUDRA GLOBAL SOLAR PROJECT



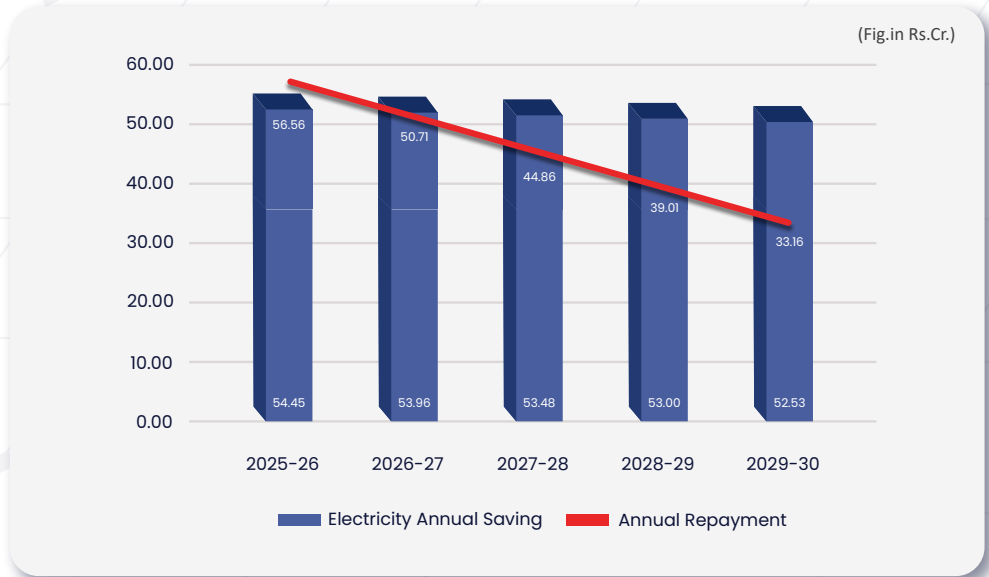
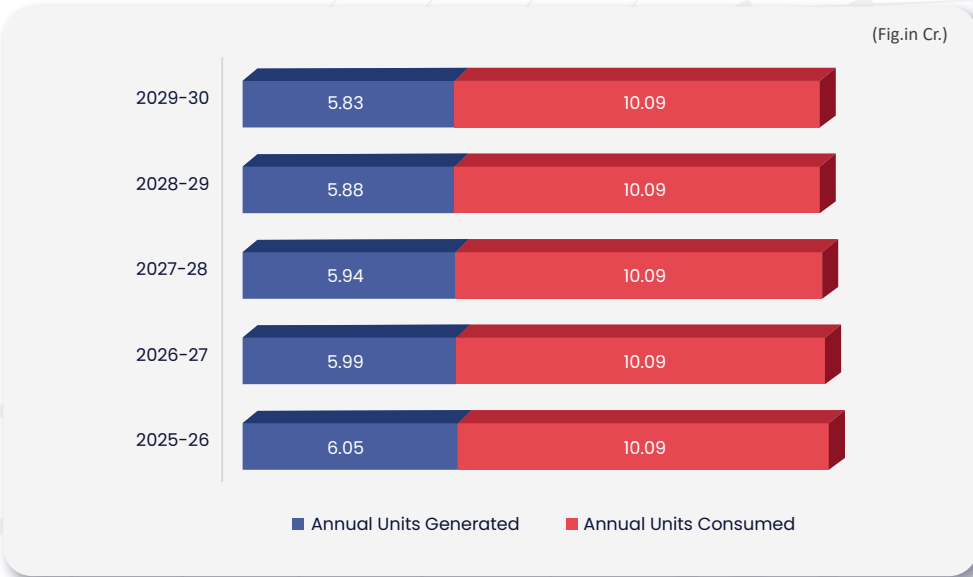


# SOLAR PROJECT PROJECTIONS

Particulars	Phase-1
Capex	Rs.190 cr.
Installed capacity	30 MW solar plant
Funding of project	80% through financial institutions 20% through own sources
Approx Loan Amount in Rs.	150 cr.
Loan Tenure	5 years
Life expectancy of solar farm	25 years
Expected turnover (volume)	1.1 Lac ton Billet/annum 2.1 lac ton TMT/annum
Expected turnover (value)	Rs. 1000+ cr*



# SOLAR PLANT FINANCIALS



- The company envisions that the project will reach a break-even stage in only its second year of commercialization, contributing greatly to the bottom line of the company in the forthcoming years
- This will lead to the company being able to increase its capacity utilization of SMS division to 50% of installed capacity up from the current 33% level.
- The capacity utilization of rolling mill division will increase to 80% of installed capacity with the company becoming energy independent.
- The additional production in both the divisions will not only help increase the overall output of the company and achieve economies of scale but also increase the turnover of the company to Rs.1000+ cr\*



\*above figures are calculated based on the current prices of iron and steel



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