The Net Zero Trinity – Emissions, water and waste

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June 2024

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"Humankind has not woven the web of life. We are but one thread within it. Whatever we do to the web, we do to ourselves. All things are bound together. All things connect."

- Native American proverb

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Why net-zero manufacturing?

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Why net-zero manufacturing?

- Energy is at the core of climate change
- Two-thirds of the world's GHGs come from energy production and use
- 2023 was the hottest year on record
- Consequences include intense droughts, water scarcity, severe fires, rising sea levels, flooding, catastrophic storms and declining biodiversity
- India is one of the top 7 emitters of GHGs globally, and will also be disproportionately impacted by climate change

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Why net-zero manufacturing?

- After agriculture, manufacturing is the biggest user of fresh water around the world
- About 22% of world's water is used by industry
- 50% of districts in India could face severe water scarcity by 2050




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Why net-zero manufacturing?

- The world generates 2.01 billion tonnes of municipal solid waste annually, with more than a third of that not managed in a scientific and environmentally safe manner
- At this rate, solid waste-related emissions are projected to increase to 2.38 billion tonnes of CO2-equivalent per year by 2050




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Why net-zero manufacturing?

- We are using the equivalent of 1.6 Earths to maintain our current way of life and ecosystems cannot keep up with our demands
- One million of the world's estimated 8 million species of plants and animals are threatened with extinction.



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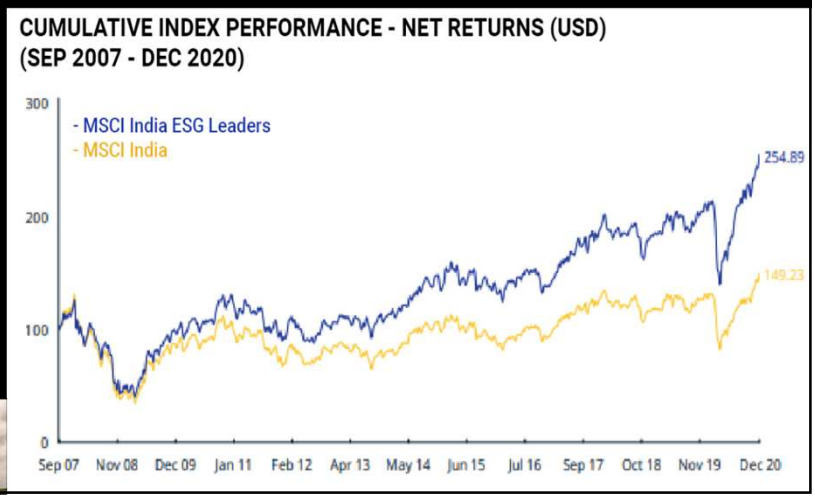
Sustainable companies outperform the market

- According to a report by Kroll, global ESG leaders achieved an annual return of 12.9% over the 8-year period studied, in stark contrast to the 8.6% annual return generated by companies with poorer ESG performance.



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Good Green

OUR COMMITMENT TO BUILD AN INCLUSIVE, EQUITABLE AND GREENER WORLD

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First decade of sustainable manufacturing from FY11 – FY21, we achieved

0	50%	4X	30%	50%
Waste to landfill	Reduction in specific emissions	Water positive	Reduction in specific energy consumption	Renewable energy portfolio

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Some key things we learned

01

Mindset change takes time, direct ROI of sustainability initiatives increases confidence and ownership of manufacturing teams

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Some key things we learned

02

It's relatively easy to keep emitting the same carbon emissions and offsetting them by carbon credits or mitigation projects elsewhere. But we choose to look inward first.

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Some key things we learned

03

Pivoted from reducing the impact of our operations, to adopting a life cycle lens encompassing cradle to grave understanding of impacts and mitigation measures.

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Case study on Emission-Water-Waste net-zero

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BIOMASS WASTE TO FUEL

Converting biomass waste to briquettes for fuel. Dewatering Press: Reduces biomass moisture to 55% for direct boiler use

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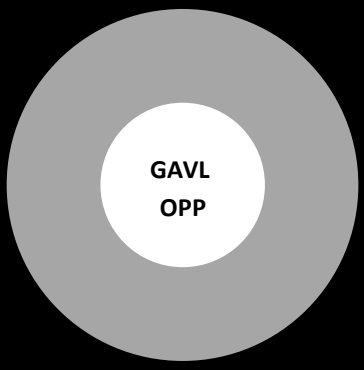
RENEWABLE POWERED

Complete operations are 99% renewable powered



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SUSTAINABLE PLANTATION

Working with farmers to cut water use for plantation by 90%

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CONTINUOUS STERILIZATION

Saves 70 MT of steam daily

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THE ROAD AHEAD

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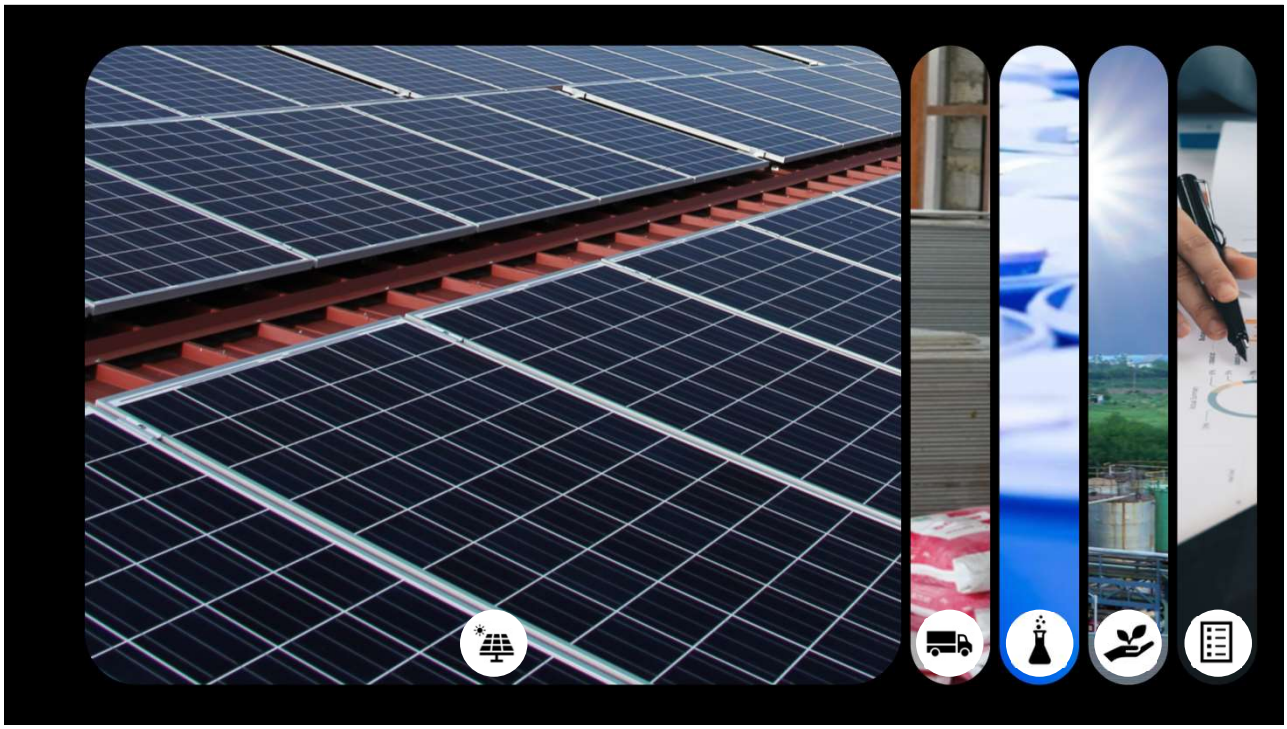

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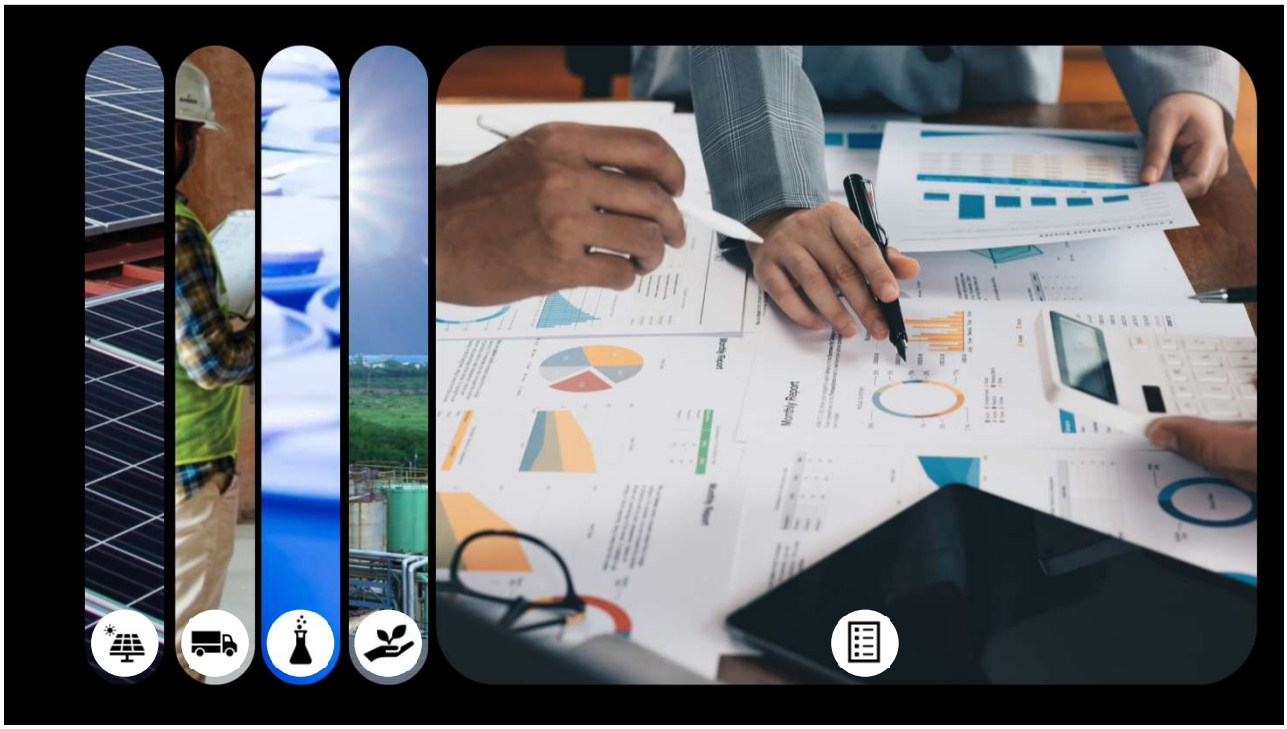

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THANK YOU

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