Pioneering a Greener Tomorrow

Aligned with our Vision, we are dedicated to minimising our carbon footprint by adopting sustainable operating processes. We focus on providing green chemistry products, reducing resource dependence, conserving energy and water, controlling emissions, and minimising waste.

Material Topics

Energy Efficiency and Carbon Emissions

Waste Management

Water and Effluent Management

Air Pollution

Biodiversity Protection

Highlights 2023-24

8,77,228.6 GJ
TOTAL ENERGY CONSUMED FROM RENEWABLE SOURCES (GJ)

INR 27.8 Million
YEARLY SAVINGS DUE TO INVESTMENTS IN ENERGY EFFICIENCY

4,55,634 Kilo litre
REDUCTION IN WATER CONSUMPTION COMPARED TO 2022-23

9.96%
INCREASE IN RENEWABLE ENERGY CONSUMPTION COMPARED TO 2022-23

Energy Efficiency and Carbon Emissions

Energy consumption is a major source of emissions and directly impacts our operational costs. To minimise our carbon footprint, we have implemented an emissions management strategy aimed at decarbonising our processes and mitigating climate change risks. We have developed an energy management strategy to optimise energy use, to reduce the wastage, and increase the share of renewables in our energy mix. Our energy management strategy focuses on enhancing energy efficiency through process optimisation, the adoption of energy-efficient technologies, and conservation activities such as waste heat recovery. In line with this strategy, we are actively working to increase the use of renewable energy in our operations through solar and wind projects and to reduce the fossil fuel consumption.

Decarbonisation Strategy

At Hikal, reducing GHG emissions is not just a business imperative but also a crucial aspect of our environmental stewardship. We have developed a decarbonisation strategy based on a three-step approach.

Define
Our unique approach to mitigating the impact of our operations.

Setting Baseline
Set a baseline for Scope 1 and Scope 2 emissions.

Deliver on our Climate Commitments
Establish a clear decarbonisation roadmap with defined Scope 1 and Scope 2 targets.

Funding from IFC World Bank
Implemented sustainable clean energy projects with special funding from IFC World Bank

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Tracking our Progress

Our GHG Emissions

(in $MTCO_2e$)

Emissions	2022-23	2023-24
Scope 1 emissions	26,793.24	21,410.71
Scope 2 emissions	67,737.30	67,287.01

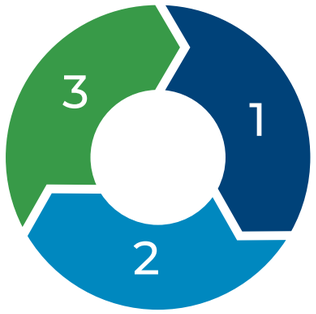
Emissions per rupee of turnover	2022-23	2023-24
Total Scope 1 and Scope 2 emissions per rupee of turnover	4.67	4.97

We are in the process of calculating scope 3 emissions for all the applicable categories.

Decarbonising Roadmap

Phase 3: Actions & Impact (Commence)

- Submission SBTi Targets
- Deployment of Energy saving Project
- Public Goals (Carbon neutrality, SBTi, RE100, other)
- Verified Emissions Reductions
- Renewable Energy & Cleantech(PPA / VPPA)



Phase 1: Initiation Programme (Completed)

- Baselining for Scope 1& 2 emissions
- Material Topics Identification
- GHG Reduction Targets (SBTIs)
- Deployment of ESG Platform
- Evaluation of ESG readiness and performance vs peers

Phase 2: Programme Governance (Ongoing)

- Baselining for GHG Scope 3
- Signatory to SBTi
- Setting Scope 1 and Scope 2 emissions target based on phase 1 findings
- Design of Decarbonisation Pathway
- Energy Efficiency Audit
- Renewable Energy Integration
- Accounting of scope 3 emissions

Energy Efficiency

Our corporate-level Energy Conservation Committee (EnCon) spearheads various initiatives across our facilities to achieve energy efficiency. We are implementing energy efficiency measures throughout our facilities and operations. These measures include optimising production processes, upgrading equipment and machinery, and utilising energy management systems to monitor and reduce energy consumption.

Tracking our Progress

Our Energy Consumption

(GJ)

Total Energy Consumption	2022-23	2023-24
Total energy consumption (RE+Non RE) (GJ)	14,14,586.09	14,20,655.49
Total energy consumed from renewable sources (GJ)	797,758.73	8,77,228.606

Energy Efficiency Measures

Crop Protection Division

- Replacement of FO boiler burners to improve efficiency
- Installation of Dry Vacuum pumps
- The layout of utilities was revised to optimise energy consumption for circulation pumps in the cooling tower and chilling plant
- Installation of economisers to recover waste heat from flue gas
- Initiatives for heat recovery through condensate recovery and hot water generation
- Preventing heat loss in steam pipes through proper selection of pipe sizes
- Improvement in capacity and efficiency of briquette boilers
- Reviewed energy-intensive pumps to optimise their head and flow
- Revamped HCl Scrubber System Engineered for 32% Concentration Output
- Optimising airflow to reduce air compressor downtime
- Using a centrifugal compressor instead of a screw compressor for the chilling plant
- Initiatives to save energy in the chiller unit aimed at enhancing its performance
- Enhancing chiller performance through the installation of online condenser cleaning systems
- Initiatives to save water in cooling tower blowdown processes

INR 22.4 Million
INVESTMENTS MADE

INR 14.4 Million
YEARLY SAVINGS

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Pharmaceutical Division

- Optimising pumping power through various methods
- Installation of waste heat recovery system
- Optimising cooling tower usage
- Installing Variable Frequency Drives (VFDs) in cooling tower pump

INR 0.50 Million
INVESTMENTS MADE

INR 13.4 Million
YEARLY SAVINGS

Renewable Energy

We have been consistently procuring green energy for our facilities. In 2022-23, we initiated long-term Power Purchase Agreements (PPAs) with two solar power developers this helped us to secured 8 MW and 3 MW for our Taloja and Mahad units, respectively in 2023-24. We signed an agreement to obtain renewable energy from a hybrid (wind and solar) project in 2022-23, securing 2.8 MW for our Panoli unit in 2023-24. We have begun the process of identifying a renewable energy project partner for our Jigani unit.

8,77,228.60 GJ
RENEWABLE ENERGY USED

INR 104.70 Million
TOTAL COST SAVING IN MAHAD, TALOJA AND PANOLI PLANT DUE TO USE OF RENEWABLE ENERGY

80%
TARGETED RENEWABLE ENERGY CONSUMPTION BY 2027-28

9.96%
INCREASE IN RENEWABLE ENERGY CONSUMPTION COMPARED TO 2022-23

Waste Management

We adhere to the principles of the 3R concept: Reduce, Reuse, and Recycle. We have established standard operating procedures for managing hazardous, non-hazardous, e-waste, and biomedical waste. Throughout the year, we have initiated the use of recovered solvents in our processes to minimise fresh solvent consumption. We have a dedicated laboratory focused on waste treatability studies. Conducting regular inspections allows us to implement necessary improvements for enhanced efficiency and environmental sustainability. Our 'Wealth from Waste' programme aims to identify waste materials that can be reduced, reused, or recycled.

60%
WASTE RECYCLED

6%
WASTE REUSED

90%
SOLVENT RECOVERED AND REUSED

Tracking our Progress

Waste Generated by Type

(Metric tonnes)

Waste	2022-23	2023-24
E-waste	8.84	3.23
Plastic waste	142.31	208.74
Bio-medical waste	0.06	0.06
Other non-hazardous waste	3,043.32	5,137.67
Other hazardous waste	57,693.74	57,438.13

The hazardous waste produced by our operations is responsibly disposed off through authorised recyclers and Common Hazardous Waste Collection, Treatment, Storage & Disposal Facility (CHW-TSDF). E-waste generated is sold to authorised vendors. Plastic waste is recycled through approved recyclers.

Waste Recycled/ Reused/ Recovered

(Metric tonnes)

Process	2022-23	2023-24
Re-used	2,399.20	3,984.00
Recycled	32,255.08	37,865.45
Other recovery option	64.64	1,839.00
Total waste recycled/ reused/ recovered	34,718.92	43,688.45

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Water and Effluent Management

Water plays a crucial role in our business operations. We acquire surface water from either rivers or lakes managed by the Government Industrial Development Authority. In our recent initiatives, we have focused on reducing our freshwater consumption by implementing recycling methods such as Zero Liquid Discharge (ZLD), installation of Mechanical Vapor Recompression system enhancing steam recovery processes and upgrading the effluent handling infrastructure at all our sites. The lastest Mechanical Vapor Recompression system installed in our units uses energy recovered from the condensate to create a pure liquid distillate and a concentrated product/waste, reducing evaporation energy use by 90% or more. ZLD has been installed and commissioned in our R&T facility in Pune with capacity of 30 KLD. At all other manufacturing facilities, we have installed ETPs and STPs. The treated water is reused as much as possible, and rest is discharged in compliance with regulatory requirement. We have set ambitious targets to reduce our water footprint by 2%, through these strategic initiatives.

Tracking our Progress

Water Consumption

(Kilolitres)

Water Consumption	2022-23	2023-24
Total water consumption	10,65,241.50	6,09,607.50

Water Intensity

(kL/INR Million)

Water Intensity	2022-23	2023-24
Water intensity per rupee of turnover (Total water consumption / Revenue from operations)	52.66	34.16

Water Conservation Initiatives

Water Recycling Initiatives

- Multi-Effect Evaporators and Reverse Osmosis units are installed at pharma sites
- Process water is recycled for washing at Crop Protection sites
- Zero Liquid Discharge facility
- Reverse osmosis system at ETP outlet water

Water Conservation Initiatives

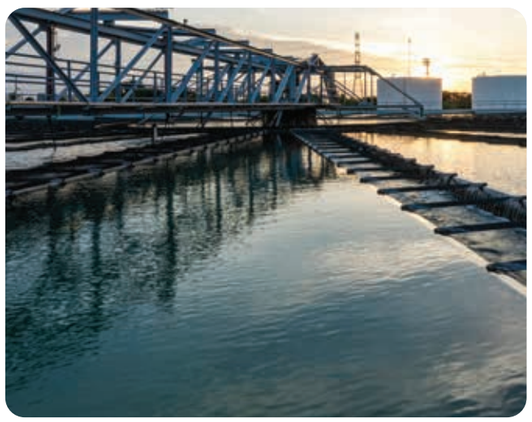
- Optimising processes to minimise water consumption per batch
- Rainwater harvesting
- Reducing the amount of boiler and cooling tower blowdown through the implementation of an effective water treatment regimen
- Providing training sessions to raise awareness about water conservation

INR 3.5 to 4.0 Million per annum
OPERATIONAL SAVINGS DUE TO PEDAL DRYER FOR ETP SLUDGE DRYING

USD 6 Million
INVESTMENTS MADE TO ENHANCE EFFLUENT TREATMENT IN 2023-24

42.77%
REDUCTION IN FRESHWATER CONSUMPTION IN 2023-24 COMPARED TO PREVIOUS YEAR

6,09,607.50 Kilo litres
WATER FOOTPRINT IN 2023-24



Air Pollution

We have implemented effective systems to regulate emissions from boilers, diesel generators, and scrubbers across our operations. These measures include a bag house for boiler stack emissions control. Continuous air monitoring systems are installed at pharmaceutical units in Bengaluru. The Online Continuous Emission Monitoring Systems (OCEMS) at boiler stack track PM, SOx, and NOx levels. In Crop Protection units, monthly ambient air quality monitoring is conducted by an MOEF-approved agency, assessing parameters like PM, SO_2, NO_2, NH_3, and CO. Continuous real time air monitoring is also conducted around the clock at various points within factory premises. We use express feeder system at all industrial area factories to ensure uninterrupted power supply, thus reducing reliance on diesel generators.

Tracking our Progress

Our Emissions

(MT)

Emissions	2023-24
SOx	39.90
NOx	85.9
PM	96.3
CO	0
NH_3	0

Biodiversity Protection

We acknowledge the potential impact our operations may have on local biodiversity and are committed to proactively minimising any adverse effects. Regular biodiversity assessments are conducted to gauge our operational impact. Through these assessments, we discovered that our Jigani unit is situated near the ecologically sensitive Bannerghatta National Park.

To offset our ecological footprint, we are actively implementing measures to neutralise our ecological impact. We engage with our stakeholders as they help us in the process of identifying and pursuing opportunities to conserve ecosystems surrounding our operational areas.

As part of our biodiversity conservation initiatives, we have established a green belt near our chemical manufacturing facility. This area serves as a refuge for diverse species, conserving biodiversity while acting as a buffer zone that reduces pollution impacts and improves air and water quality.

Innovation Meets Excellence

#PledgeForGreenChange

This year, we celebrated Environment Week with great enthusiasm and vigour by launching #PledgeForGreenChange campaign.

#PledgeForGreenChange campaign, a powerful initiative was launched with an aim to promote sustainable living and environmental responsibility. This campaign, was launched as an online and offline initiative, centered around the theme 'Living Sustainably in Harmony with Nature' to foster a sense of ownership and responsibility among Hikal's employees and stakeholders. The campaign saw huge participation on social media particularly on LinkedIn.

The leadership team set the tone of the campaign by sharing their green pledges on LinkedIn, sparking a chain reaction among our employees. Many came forward to post their pledges on LinkedIn to bring a small green change in their daily lives, creating a ripple effect that inspired others to follow suit. This public commitment not only demonstrated our collective dedication to sustainability but also formed a chain of responsibility, significantly expanding the campaign's reach and impact.

Across all Hikal sites, the week was marked by various eco-friendly activities. At Pune R&T, employees took an Environment Oath, with senior management providing valuable insights on conservation. The Mahad plant hosted a tree plantation drive, where around 500 saplings were planted, while Jigani Unit 1 & 2 organised tree plantations, essay competitions, and poster-making events. At Panoli, the team engaged in quizzes, challenges, and training on environmental compliance. The #PledgeForGreenChange campaign successfully united the Hikal community in a shared commitment to sustainability, making a tangible impact on both our organisation and the environment.

100K+

CUMULATIVE ORGANIC IMPRESSIONS GARNERED IN A WEEK

2,617+

CUMULATIVE ORGANIC ENGAGEMENT RECEIVED IN A WEEK

400+

NEW LINKEDIN FOLLOWERS ADDED WITHOUT ANY PAID MEDIA OR PROMOTIONS

2,500+

NEW VISITORS DRIVEN TO HIKAL'S LINKEDIN PAGE