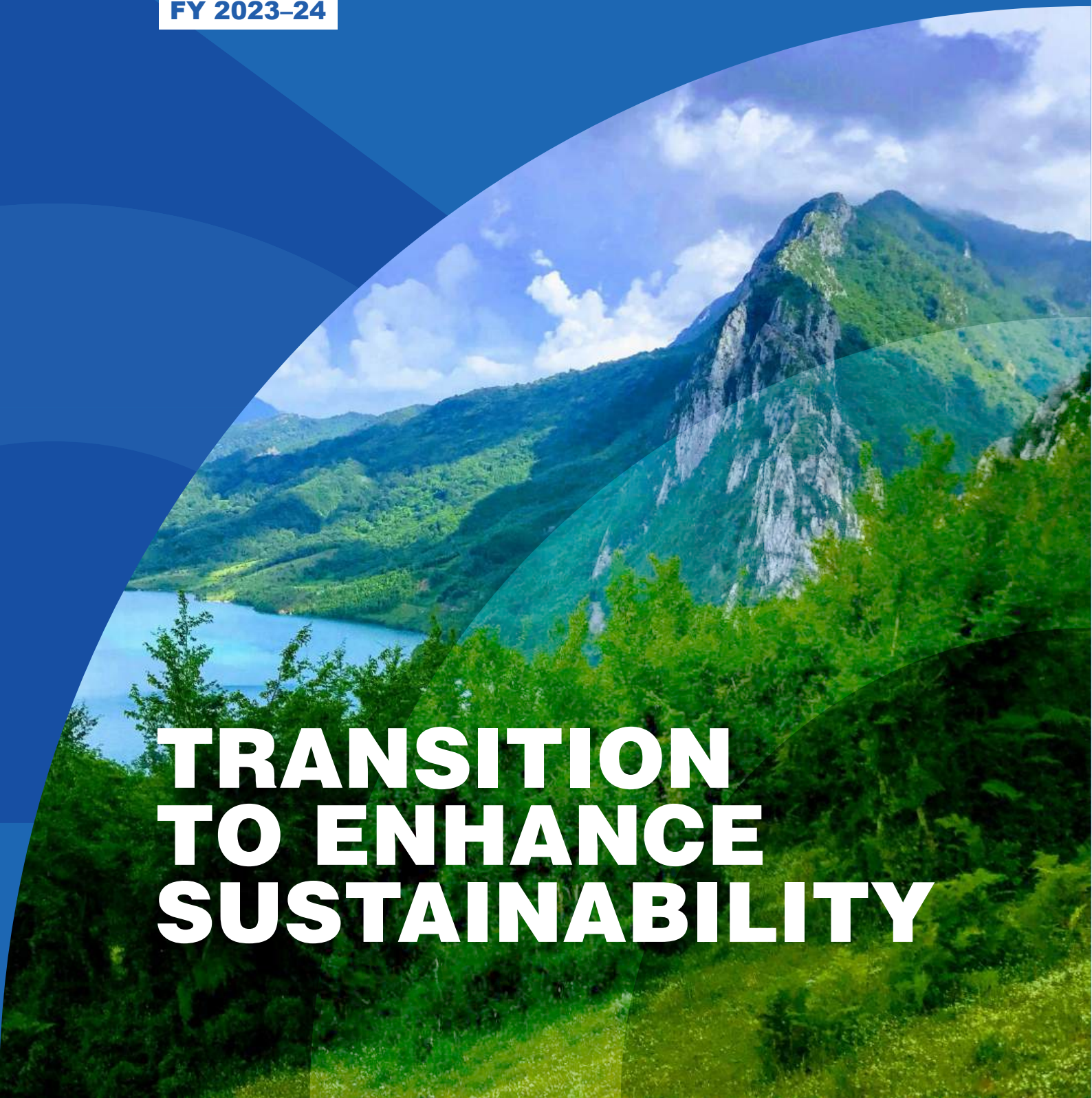
Brakes India

A TSF Group Company

SUSTAINABILITY REPORT

FY 2023–24



TRANSITION TO ENHANCE SUSTAINABILITY

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Message from Managing Director

Dear Stakeholders,

Warm Greetings!

At Brakes India, we believe that business success must be deeply intertwined with environmental stewardship and social responsibility. As the world evolves, so do we—continuously aligning our values and aspirations with those of our customers, employees, shareholders, and partners.

Our sustainability approach rests on three core pillars: **environmental stewardship, social accountability, and long-term value creation.** These guide every initiative we undertake, as we work toward building a greener, more equitable future.

Environmental Stewardship

Sustainability has been at the heart of Brakes India for decades. From our earliest days, we have prioritized ecological responsibility— preserving the existing trees on our campuses and actively enriching green cover across locations. Today, our facilities are home to over 100,000 trees, offering not only ecological benefits but a unique sense of serenity. Visitors often remark that stepping into a Brakes India plant feels more like entering a garden than a factory.

We have pioneered rainwater harvesting by constructing recharge ponds, helping our facilities move toward water neutrality. We recycle manufacturing waste for construction purposes and use environmentally responsible packaging materials. Our foundry, established in 1981, was awarded the prestigious GreenPro Ecolabel by the Confederation of Indian Industry—an endorsement of our eco-conscious manufacturing practices.

Social Accountability

Our commitment to society goes well beyond traditional CSR. We invest in building resilient communities and fostering a workplace where our people can grow. Through initiatives such as extensive medical care via Sundaram Medical Foundation, on-site health centers, and financial assistance for life events, we ensure that our employees and their families are well supported.

We have also built matriculation schools and vocational training centers to serve the broader community. Our dedication is evident in our involvement in charity marathons, blood donation drives, and other community programs that promote collective well-being. Diversity and inclusion remain core to our workforce philosophy, reflecting the pluralistic values we uphold.

Long-Term Value Creation

We are committed to science-based, forward-looking action that helps shape a sustainable, circular future for our industry. By investing in pioneering technologies and progressive ideas, we seek not just to comply, but to lead.

We remain deeply grateful to our employees, customers, partners, and communities for their continued trust and support. Together, we will continue to nurture a legacy of sustainability that leaves a lasting, positive impact on our society and environment.

Sriram Viji
Managing Director
Brakes India Pvt. Ltd

ESG Highlights FY 2023-24

ENVIRONMENT HIGHLIGHTS

Renewable Energy Usage
51.38 %

Environmental Non-Compliance
0

Rainwater utilization
33 %

Waste Diverted from Disposal
81,362.71 MT

Avoided Emission
1,59,071.4 Tons of CO2 Equivalent

SOCIAL HIGHLIGHTS

Corporate Social Responsibility (CSR) Expenditure
INR 7.72 crores

Training Manhours per employee
3.62

GOVERNANCE HIGHLIGHTS

Information security non-compliance is
0

Overview of the Report

ABOUT THE REPORT

Sustainability has always been a top priority for us, as we strive to make a positive impact on society by incorporating ecological sensitivity and inclusivity in all areas of our business. It is crucial to us that our initiatives align with regional, national, and international sustainability goals and standards.

To demonstrate our commitment to ethical and environmentally conscious practices that benefit all stakeholders, including the public, we are releasing our sustainability report this year with the theme of "Transition to Enhance Sustainability". This report outlines our approach and progress toward addressing sustainability-related issues. Through our extensive sustainability initiatives, we are walking on the path toward a sustainable tomorrow. Our commitment to the transition is staunch, keeping us determined to focus on sustainability issues.

In this report, 'Brakes India Private Limited' is referred to as "Brakes India", "BIPL", "We", "Our", "Firm", "Organization" and "Company".

REPORTING PERIOD AND BOUNDARY

Our latest sustainability report provides an in-depth look at our sustainability initiatives for the period from 1st April 2023 to 31st March 2024. We are proud to share the progress and the milestones that we have made through our sustainability initiatives/actions/commitments during the reporting period. Our aim is to provide complete transparency about our sustainability efforts and achievements, and this report serves as an important tool to track our progress, identify areas of improvement, and set new sustainability goals and targets.

This report encompasses a comprehensive analysis of our 19 manufacturing facilities, including our head office at Padi, 15 Brake Division plants, and 4 Foundry Division plants located throughout India.

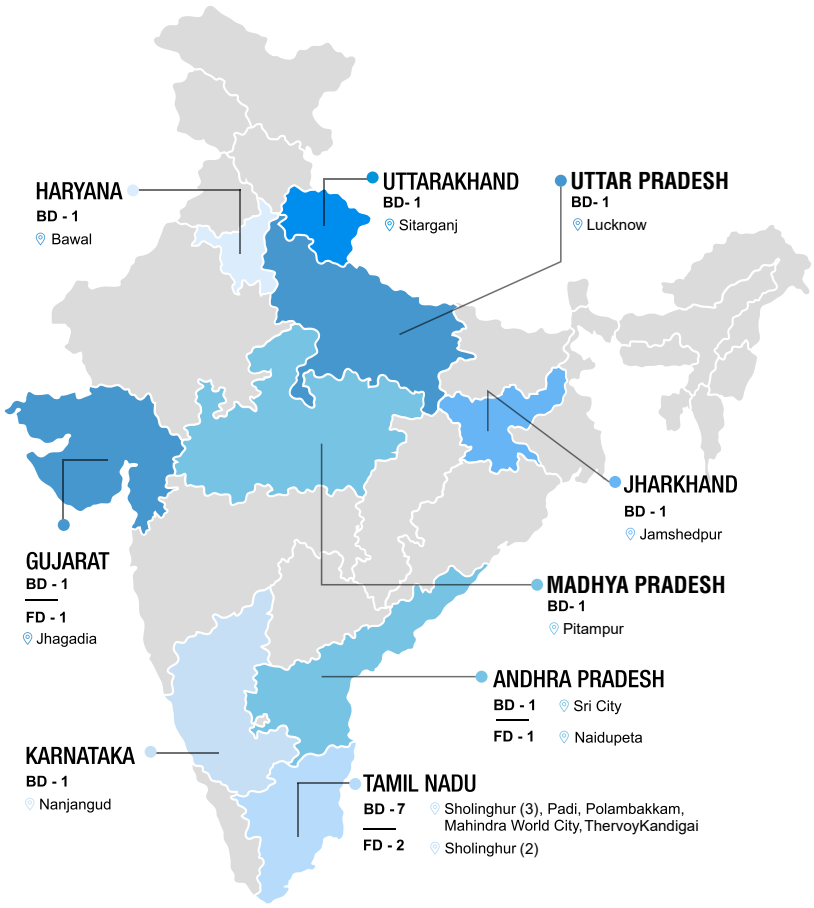
We have considered our 19 production facilities (15 in Brake Division and 4 in Foundry Division) as follows:

BRAKES DIVISION

- Uttarakhand
- Haryana
- Gujarat
- Jharkhand
- Madhya Pradesh
- Tamil Nadu
- Karnataka
- Andhra Pradesh
- Uttar Pradesh

FOUNDRY DIVISION

- Tamil Nadu
- Gujarat
- Andhra Pradesh



REPORTING STANDARD

Our sustainability report adheres to the Global Reporting Initiative (GRI) Standards 2021. We are reporting on our sustainability activities from 1st April 2023 to 31st March 2024 with reference to the GRI Standards. This report also considers the sustainability guiding principles with reference to Automotive Industry Action Group (AIAG).

FEEDBACK

We value your feedback and welcome any comments, questions, or suggestions you may have regarding our sustainability performance. Our aim is to continuously improve and make a positive impact on society. Feel free to reach out to us through:

Email : esg@brakesindia.co.in
Address : Brakes India Private Limited,
Padi, Chennai - 600 050,
Tamil Nadu
Phone : +91-(0)44 26526000
Website : www.brakesindia.com

We will strive to address your concerns promptly and effectively.

DISCLAIMER

As we move towards a more sustainable future, we are committed to improving our environmental, social, and governance (ESG) performance. Our sustainability report may include futuristic statements that reflect our expectations for our company. However, we acknowledge that there are uncertainties and risks that we may face, and actual outcomes may differ significantly from those stated or suggested. We will continue to review and update our sustainability initiatives based on the latest developments, information, or events and work towards achieving our goals while fulfilling our responsibilities to all our stakeholders. Statements of expectation, forecasts, and projections related to such future events are based on assumptions that may not remain valid for the whole of the relevant period. Future results could be materially different from any forecast contained in the analyses. Except as may be required by law, the Company disclaims any obligation to publicly edit, change, or revise any such statement considering later developments, information, or events.

About T.S. Santhanam Family (TSF) Group

With our heritage dating back to 1936, the TSF group (part of TVS) has a vast portfolio spanning from auto components to auto dealerships and distribution, and financial services, establishing itself as a leader in the industry. As a global supply chain partner, the TSF Group enjoys strong relationships across North India, Europe, and Asia-Pacific regions. It is renowned for strong customer connections and sustainability focus, which is reflected in its core beliefs of a long-term business outlook, corporate governance, and sustainability.

In the automotive industry, the TSF group operates across segments ranging from component manufacturing to parts distribution, vehicle dealership and vehicle financing. The group serves marquee customers across the globe and is known for high-quality design-led manufacturing. The TSF group companies are market leaders in their segments and include Brakes India, Wheels India, Axles India, Turbo Energy, IMPAL, Madras Auto Service, and Sundaram Motors.

In financial services, the TSF Group promoted Sundaram Finance (founded in 1954), one of the most respected names in the Non-Banking Financial Companies (NBFC) sector, with interests in automotive lending, general insurance, housing loans, and asset management. The financial services business has more than INR 50,000 crores in assets and a further INR 56,000 crores in assets managed.

TSF Group

Auto Components	Auto Distribution & Dealerships	Finance and Insuracnce
Brakes India	India Motor Parts & Accessories Limited	Sundaram Finance
Wheels India	Sundaram Motors	Royal Sundaram General Insurance
Turbo Energy	Madras Auto Service	Sundaram Home Finance
Axles India		Sundaram Asset Management Company
Sundaram Composites		Sundaram Finance Holdings

~ INR 21,000 Crore Revenue | 42,000 + employees | 1,200 Branches
36+ Manufacturing Facilities | 15 Business Entities

About Brakes India Private Limited

Our company was founded in 1962 and we are a leading supplier of braking systems in the Indian market and a global supplier of ferrous castings, for passenger vehicles, light commercial vehicles, heavy commercial vehicles, and tractors. Promoted by the TSF Group, whose heritage dates to 1936, the company has a strong in-house Research and Development (R&D) capability, that includes state-of-the-art test facilities, and a high-speed test track built to international standards. We have a world-class manufacturing operation with a reputation for providing high-quality products. We have an expansive supply chain, serving marquee Original Equipment Manufacturers (OEMs) across the globe. Our world-renowned iron foundry produces over 1,80,000 tons of safety-critical castings from India and Oman.

Owing to our exceptional engineering team of over 250 engineers, our design, development, and validation have exceeded customer expectations. We have a large global customer base for safety-critical parts with exports worth as high as INR 1,500 Crores. Our trusted brands TVS-Girling, TVS-Apache and TVS-Sprinter are leading names in the auto spare parts segment. With revenues of more than INR 5,000 crores, the company wears numerous feathers in its hat such as National Awards for Energy conservation, the Leadership and Excellence Award in Safety, Health and Environment; Total Productive Maintenance (TPM) Excellence Award and the prestigious Deming Application Prize to name a few. We have a staunch commitment to implementing sustainability across our value chain.

~ INR 7,000 Crore Revenue | Engineering Team of 250+ | R&D Spending of INR 84.04 Crores | 10,000+ Employees | 5 Business Units | 19 Manufacturing Facilities | 500+ Suppliers | 35+ OEM Customers

OUR VISION

- To champion customer satisfaction by providing high-quality products and services at globally competitive prices
- To be a leading company in our areas of operations in the light engineering industry
- To add value to the quality of life of our employees and fulfill their reasonable aspirations.
- To create an atmosphere of trust and care that is conducive to the team to harness their potential and showcase high standards of performance.
- To facilitate a transparent and responsive relationship with our stakeholders
- To conduct ourselves as responsible corporate citizens known for integrity and ethics

OUR CORE VALUES

OUR JOURNEY

1962
Joint venture agreement with Lucas

1963
Start of production at Padi

1964
First drum brake shipped to Mahindra

1964
First Girling dynamometer inaugurated

1965
Start of S-cam brake production at Padi (for the first time in India)

1966
Start of tandem master cylinder production (for the first time in India)

1968
First export of rubber seals from Padi

1975
Govt. of India recognizes Brakes India R & D

1975
Sales crosses 100 crores

1979
Start of Sholinghur operations

1981
Start of foundry operations in Sholinghur

1984
Start of production of DOT 3 brake fluid

1985
First shipment of calipers to Maruti (for the first time in India)

1986
First supply of railway brakes for EMU coaches

1987
First export of tractor brakes to Massey Ferguson UK

Start of hose manufacturing with Hitachi collaboration

Start of Gurgaon facility

1988
Start of Sundaram Polymers

Start of cellular concept of manufacturing

1992
Start of seal facility in Nanjangud

1995
Start of Polambakkam operations

Launch of DOT 4 brake fluid

1999
Start of TPM initiative

2000
Sales crosses 500 Crores mark

2001
Opening of mini test track in Padi R&D

2003
Radiator coolant launched

2005
Sales crosses 1000 Crores mark

Start of foundry operations in Pulivalam

2007
Apache 100% export-oriented unit inaugurated

2008
1 million caliper seals exported to TRW

World-class test track inaugurated in Polambakkam.

Foundry sister concern established in Salalah Oman

2009
Brake Division Plant established in Mahindra World City, SEZ.

Sales of coolant cross 1 million litres

2010
Start of Sitarganj operations

Start of supplies from Jamshedpur

Brake fluid plant in Pune inaugurated.

Opening of the skill development centre

2011
Shipment of 1 million s-cam brakes

Start of supplies from Sanand plant

Sales crosses 2000 cr mark

2012
Start of foundry operations in Jhagadia

2013
Operations started at Jhagadia Plant

2016
Assembly operations started at Bawal Plant, Haryana state.

2017
Localized antilock braking system (ABS) introduced for M3 category vehicles

Localized electric parking brake (EPB) introduced for the first time in India.

2018
Commencement of fully integrated operations at Jamshedpur for S-cam brakes

SEZ facility at Mahindra World City is expanded with plant-2 (80,000 sq. ft.)

Commencement of operations for new foundry unit at Naidupeta (AP)

Localized ABS/ESC production from Feb 2019 for M&M Bolero vehicles.

TPM initiatives started towards Advanced Special Award.

2019
S-cam assembly plant set up at Pithampur

Pilot production for disc friction pads started at Sri City

Launch of DOT4+ brake fluid

Launch of Uni-booster product for the first time in India

2020
CII's National Level Gold Award for Eliminating MURI in the Blanking Operation (The Champion's 3M Competition)

Certificate of Appreciation for best-in-class quality performance

Award for Best Cost Management by Isuzu Motors India

Certificate of Appreciation for Best-in-Class Quality Performance by John Deere

Certificate of Appreciation for Exceptional Support during challenging times by Tata Motors

2021
Award for Outstanding Overall Performance by Mahindra & Mahindra

Best Supplier Award by FIAT Chrysler

Special Award Supply Chain Efficiency by Volvo Eicher

2022
GreenPro certificate by CII confirming that castings manufactured by all plants of Brakes India – Foundry Division qualify as Green Products.

Start of manufacturing Green Castings to support the net-zero roadmap of customers.

Inauguration of Brakes India Air Actuation facility at Thervoy Kandigai

2023
Best quality performance by ISUZU

Outstanding performance – Environment (CO_2 reduction) by Honda

Eco edge emerging certificate by Skoda & Volkswagen

Best Supplier Quality Award by Isuzu

Excellence in Delivery Quality & Cost by Honda

Spare Parts Delivery on Time by Honda

Best Performance in Quality by Ashok Leyland

Sustainability Excellence Award by Tata Motors

2024
Co-Learning through exemplary sharing of Best Practices by Maruti Suzuki

Overall Performance by Maruti Suzuki

Engineering Expertise at Brakes India

At Brakes India, we take pride in our comprehensive engineering capabilities, providing a full range of design, development, testing, and validation services. With an exceptional engineering team of over 250 engineers, our upfront design capability is CAD/ CASE compatible with customer requirements, enabling us to conduct structural, thermal, and modal analyses. We also have in-house prototype development and advanced testing and validation, including bench validation, performance, durability, and NVH.

RESEARCH AND DEVELOPMENT (R&D)

We place a strong emphasis on research and development to meet emerging market needs and regulatory standards. By investing in technology development and absorption, we gain a competitive advantage by launching customer-centric products with new features that result in better product performance. Our R&D team has developed and validated concept prototypes for motors on the drum and E-Booster, which will provide enhanced performance for our customers.

We have also made design changes to brake systems for electric vehicle applications in passenger vehicles. Additionally, we have completed the linear development by the thermal stability of a low steel grade pad for a new Original Equipment Manufacturer (OEM) customer. Our team has also designed and developed a new 410 S-cam brake, further expanding our product portfolio.

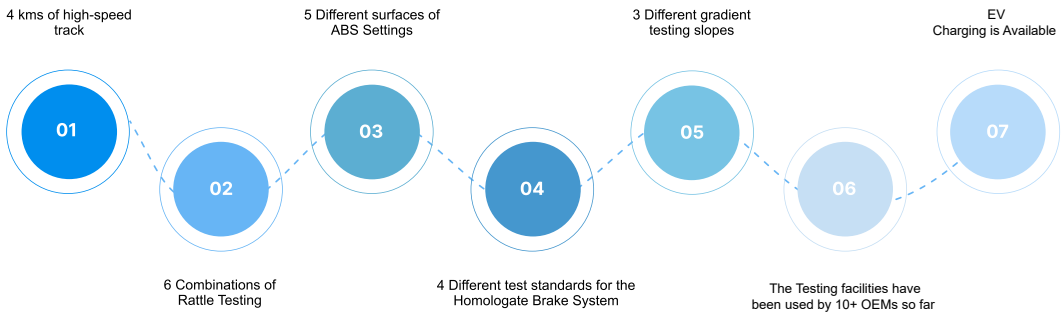
To ensure that our products meet the highest standards of performance and safety, we conduct Complex Eigenvalue Analysis (CEA) for noise reduction in commercial vehicles (CVs). We have also achieved homologation of CFK90 Retarder, another important milestone in our R&D efforts. Our research initiatives are geared towards delivering innovative solutions to meet the needs of our customers in a rapidly changing market.

In the FY 2023-24, we have invested INR 84.04 Crores in our R&D.

TESTING FACILITIES - POLAMBAKKAM PROVING GROUND (PPG)

Our team conducts extensive analysis of the duty cycle for both passenger vehicles (PV) and commercial vehicles (CV) in India, tailoring the brake design and friction to suit Indian conditions. To ensure the quality and safety of our products, we have set up an Automotive Research Association of India (ARAI) Certified world-class facility proving ground with full-fledged Research and Development, and Homologation test facilities.

OUR PPG HIGHLIGHTS



The five different Surfaces of the ABS Setting testing facility ensure that the braking systems are effective in preventing the wheels from locking up during sudden braking. This is a critical safety feature that helps prevent accidents, especially in emergency situations. In addition, our field service team is available to resolve any modifications and improvements required post-launch, ensuring that our products meet the evolving needs of our customers.

QUALITY MANAGEMENT

Ensuring manufacturing and supply of quality products, especially for a critical automotive element such as a brake system, is a pre-requisite for every OEM. To ensure the highest standards of quality, Brakes India has deployed a Quality Management System (QMS) through ISO 9001:2015 and Automotive QMS requirements through International Automotive Task Force (IATF) 16949. Brakes India also complies to any additional or specific requirements of the customers to ensure quality products are supplied to their customers.

The management is driven by a customer-centric approach, which continues to largely focus on quality, delivery, cost, new product development and sustainability. The adoption of the QMS principles enables us to enhance the maturity of their internal systems and processes and cater to the evolving consumer demands. Our systemic approach strives for consistency and uniformity across all levels of the organization. One of the key elements behind the quality of Brakes India is the encouragement provided by participation of people at various level to undertake initiatives that which is found to be the key to ensuring continuous improvement.

Brakes India continuously strives towards improvements in operational efficiency, manpower productivity etc. Management decisions are supported by facts and figures through MIS and various Management reviews. Brakes India is also equipped with ERP & Product data management software towards factual based decision making. The success of Brakes India is associated with equal contribution from our suppliers. Brakes India has strong supplier management approach towards mutual benefits.

MEETING THE GLOBAL QUALITY STANDARDS

We have continuously exceeded customer expectations through our operational excellence. We ensure efficiency by having a dedicated supplier development team, supplier quality team, and structured supplier development process.

Our manufacturing process is designed to be highly flexible and adaptable to cater to both high and low volume demands from our customers. We have implemented state-of-the-art poke-yoke systems that include camera-based visual inspection technology, ensuring the highest level of quality control. Our vertically integrated capability allows us to handle the entire design and manufacturing process of tools, dies, and fixtures in-house, providing increased efficiency and faster lead times. To ensure the complete traceability of our products, we have integrated some of our assembly lines with an IoT system, allowing us to monitor and track every stage of the process. Overall, our manufacturing process is optimized to deliver high-quality products efficiently and effectively while meeting the diverse needs of our customers.

We prioritize quality management to ensure the highest level of customer satisfaction. Our quality planning process begins with each new product launch, ensuring that quality is built into the product from the outset. We are committed to continuous improvement, and our quality management system reflects this, with regular audits and assessments to ensure that we are meeting our quality objectives and customer requirements.

29

Number of customers covered under International Automotive Task Force (IATF) 16949:2016

20

Number of customers covered under ISO 9001:2015 for off-highway vehicle

APPLICABILITY OF 'KAIZEN' IN 'TOTAL PRODUCTIVE MAINTENANCE'

As a manufacturing company, 'Production with Perfection' is our daily motto, and we don't compromise in that. Total Productive Maintenance (TPM) is the strategy that we apply to maintain our manufacturing facility.

'Kaizen' is an approach to create consistent enhancement constructed on the belief that small, continuing positive changes can reap substantial improvements. 'Kaizen' is a part of Total Productive Maintenance (TPM) activities and improvement is identified under the following eight pillars.

- Autonomous Maintenance
- Quality Maintenance
- Planned Maintenance
- Development Management
- Administrative TPM
- Environment
- Training and Education
- Occupational Health and Safety

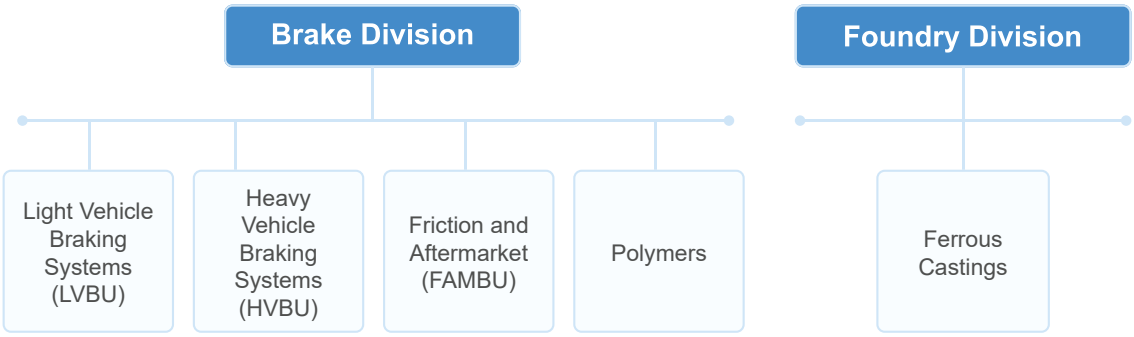
We at Brakes India have a small group at every unit comprising of one supervisor and three/four operators carrying out continual improvement activity in production, quality, cost, delivery, safety, environment, and morale.

Based on the successful implementation of 'Kaizen' in the production line, suitable rewards are provided to employees.

BUSINESS UNITS AND PRODUCT PORTFOLIO

TWO DIVISIONS AND FIVE BUSINESS UNITS

Our business has been divided into two divisions and five business units as follows



1. BRAKE DIVISION

I. LIGHT VEHICLE BRAKING SYSTEMS (LVBU)

Our LVBU is the largest producer of hydraulic braking systems for passenger and Small Commercial Vehicles.

Product Portfolio	Key Customers	Plant Location
Foundation Brakes • Calipers • EPB – Motor on caliper • EPB – Motor on drum • Integral Parking Brake • Drum brakes • Drum brakes – Drum in hat	• Advics • Ford • Honda • Isuzu • Mahindra • Maruti Suzuki • Nissan • Renault • Skoda • Stellantis • TATA • Toyota • VW • ZF	• Padi • Polambakkam • Bawal • Jhagadia • Nanjangud
Friction • Pads • Lining		
Slip Control System • ABS • Valves • Wheel Speed Sensor		
Brake Actuation • Booster Master cylinder • Vacuum Sensor		
Clutch Actuation • Plastic clutch master cylinder • Clutch slave cylinder		
Hoses • Hose assemblies		

II. HEAVY VEHICLE BUSINESS UNIT (HVBU)

Our HVBU serves to two segments as follows.

1. Commercial Vehicle
2. Tractor and Off-highway

In 'S' Cam Brakes, Our HVBU is the market leader in production and is the largest recognized supplier globally.

Product Portfolio	Key Customers	Plant Location
1. COMMERCIAL VEHICLE		
Foundation Brakes and Actuation • Hydraulic caliper • Hydraulic drum • Air caliper • S-cam drum brake • Uni booster • Booster Master Cylinder	• Tata Motors • Ashok Leyland • Volvo Eicher Commercial Vehicles • Force Motors • Daimler India • Mahindra • UD Trucks • MAN • FUSO • Meritor • SML Isuzu	• Sholinghur • Mahindra World City – SEZ • Sitarganj • Jamshedpur • Thervoy Kandigai • Lucknow • Pithampur
Air Management • Air Dyer • System Protection valve • Air Processing Unit Condensate Separator		
Wheel End Solution • Spring Brake Actuator • Brake Chamber		
Control Valves • Dual Brake Valve • Hand Control Valve • Relay Valve • Check Valve • Quick Release Valve Pressure Reduction Valve • Relay Emergency Valve		
Trailer Valves • Palm Coupling • Trailer Control Valve		
Clutch Actuation • Clutch Hydraulics • Clutch Booster		
Auxiliary Brake • Electro Magnetic Retarder • Exhaust Brake • Magnetic Valve		

Product Portfolio	Key Customers	Plant Location
2. TRACTOR AND OFF-HIGHWAY		
Foundation Brakes • Dry disc brake • Oil immersed Annular piston	• Mahindra • AL • TAFE • TMTL • ITL Sonalika • Escorts limited • Action construction limited • TMA	• Sitaganj
Brake Actuation • Master cylinder • Compensating master cylinder • Hydraulic booster / master cylinder • Slave cylinder		
Valve • Shuttle Valve		
Clutch Actuation • Clutch master cylinder • Clutch slave cylinder • Clutch booster		

III. FRICTION AND AFTERMARKET (FAMBU)

FAMBU is the leader in the Indian aftermarket service in the passenger vehicle segment with its parts sold under TVS-Girling, TVS-Apache & TVS-Sprinter. With its latest brand Revia, Brakes India has ventured into the engine oil for both passenger car and commercial vehicle segment.

FAMBU - PRODUCTS

Product Portfolio	Key Customers	Plant Location
TVS Girling Parts • Hydraulic Cylinders • Air Brake and Assemblies • Tractor Brake • Hardware • Rubber Hose	• Major Original Equipment Services (OES)	• Sri City • Sholinghur - Friction Unit
TVS Apache Friction • Brake Pads • Brake Discs • Kit Lining • Kit Lined Shoe • Friction Disc		
TVS Sprinter Brake • Brake Fluids • Radiator Coolants • Power Steering Fluid		

FAMBU – SERVICE OFFERINGS

FAMBU – Service Offerings	Key Customers
QIK Brake Service (QBS) Customers today are looking for a quick turnaround time on their vehicles when it comes to simple jobs such as change of tyres, balancing, replacement of brake pads or linings, brake fluid, coolant, etc. The need for QBS was born out of this need that was identified as a customer convenience that was much sought after. Customer safety is vital. Brake being a safety critical component, it becomes imperative for the brake system to work properly. QBS is a unique initiative for enabling quick brake diagnostics and replacement to customers. The first QBS Centre was launched in 2018 in Chennai. QBS has now expanded its network to 103 service centers across 19 states and 63 cities.	Major Original Equipment Services (OES)
Authorized Service Centre (ASC) Brakes India ASC's provide top notch quality service with genuine parts of Heavy & Medium Commercial Vehicles for Air Brake Systems. At ASCs, we have skilled manpower to diagnose the problem better in product level as well as in vehicle level. There is assurance of TVS Girling parts quality which are genuine parts. Today our network footprint falls to 53 centers in 20 states across India and we will be touching to 100 by March 2024.	

POLYMER

The polymer business unit is a major player in providing specialized services to the needs of property and colour coordination with value-added molded products. Our Polymer Business unit have a team of over 200 engineers working on plastics with portfolio spanning to Compounded Engineering thermoplastics and injection moulded components for automotive, electrical, engineering sectors and medical equipment applications.

Product Portfolio	Key Customers	Plant Location
• PP • PC • PA • PBT • ABS	• Schneider Electric • Rane (Madras) Limited • Uno Minda Limited • Toyota Boshoku Automotive India Pvt Ltd	• Nanjangud

2. FOUNDRY DIVISION (FD)

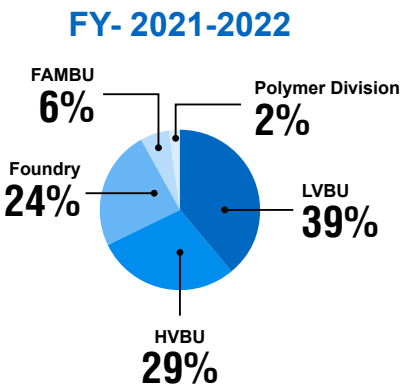
Foundry Division is the primary supplier of ferrous castings to leading brake manufacturers globally and the largest exporter of automotive castings from India. In 2003, the Foundry Division was recognized with the Deming Prize, one of the highest awards on TQM (Total Quality Management) in the world. The same year, it also received TPM award of excellence and very recently received the CII GreenPro certificate confirming that castings manufactured by all plants of Brakes India – Foundry Division qualify as Green Products.

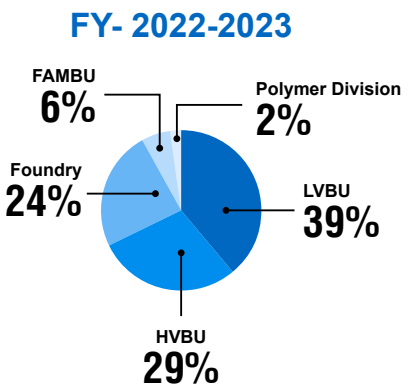
Product Portfolio	Key Customers	Plant Location
Brake Parts • Caliper housings • Bracket • Torque plate	• Bosch • Daimler • TATA • Godrej • HITACHI • Mahindra • ZF • Scania • Conti	• Sholinghur • Pulivalam • Naidupeta • Jhagadia
Turbocharger Parts		
Steering Knuckle		
Chassis parts for heavy duty trucks		
Engine bearing housing and cap		

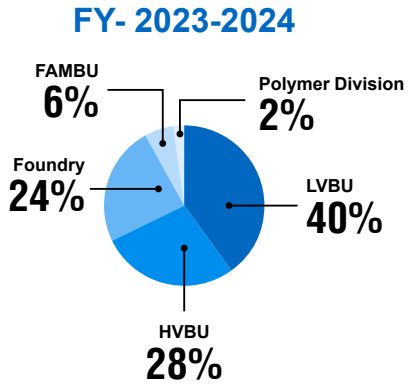
ECONOMIC PERFORMANCE

Brakes India's economic performance between FY 2021-22 and FY 2023-24 is given below:

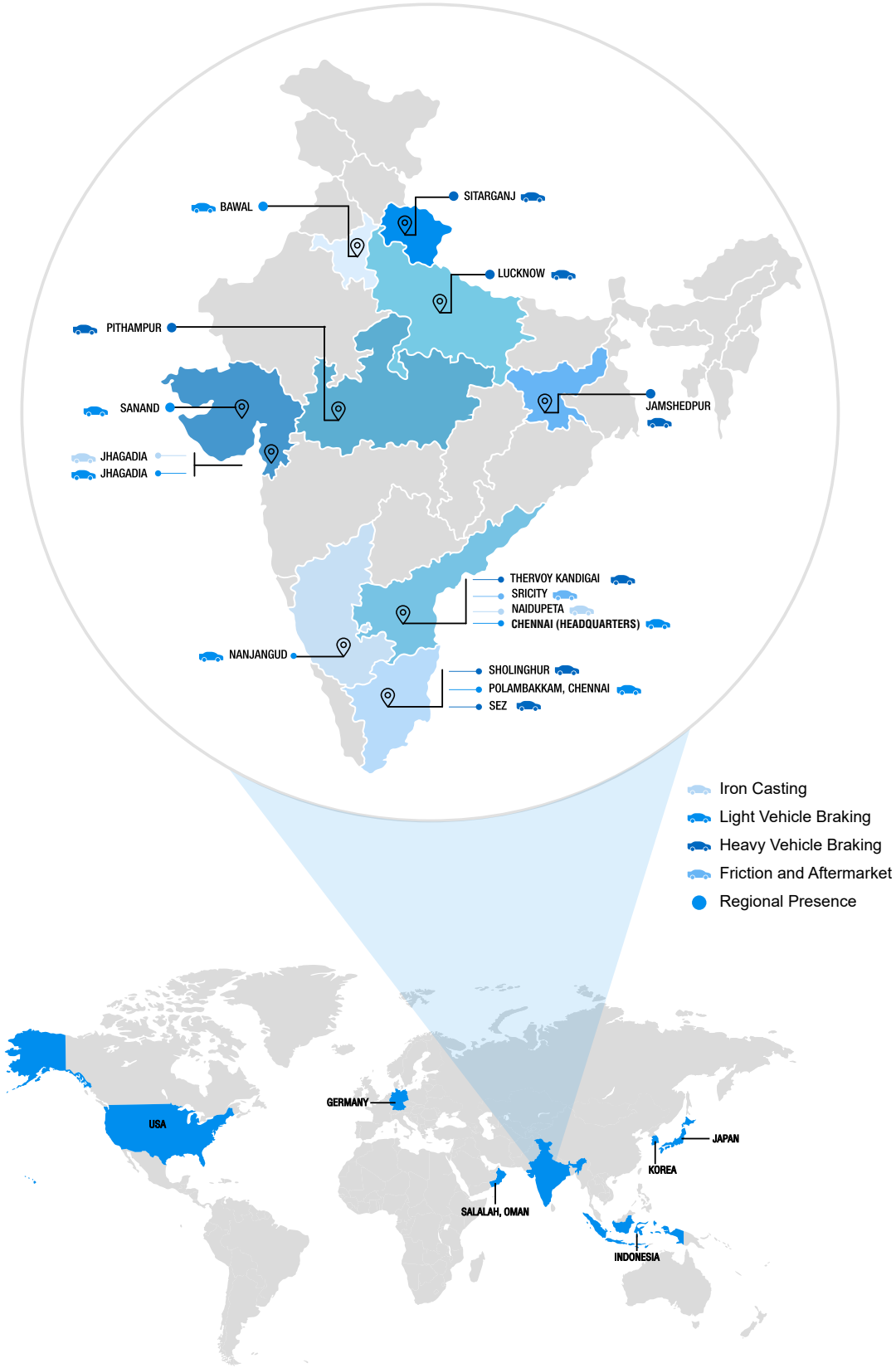
Parameters	FY 2021 - 22	FY 2022 - 23	FY 2023 - 24
Total sale in crores (Revenue from operations)	5,076.34	6,582.53	7,133.95
CSR spend in crores	8.1	5.86	7.72
Brake Division sales in crores (LV, HV & AMTIX, Excluding captive)	3,460.11	4,480.65	4,868.86
Foundry Division sales in crores (Excluding captive)	1,204.30	1,562.56	1,696.13
FAMBU sales in crores (Friction & Fluids, Excluding captive)	311.99	415.35	441.76
Polymer division sales in crores (Excluding captive)	99.94	123.96	127.19
R&D Expenditure in crores (CAPEX and Revenue)	105.65	100.61	84.04







OUR GLOBAL PRESENCE

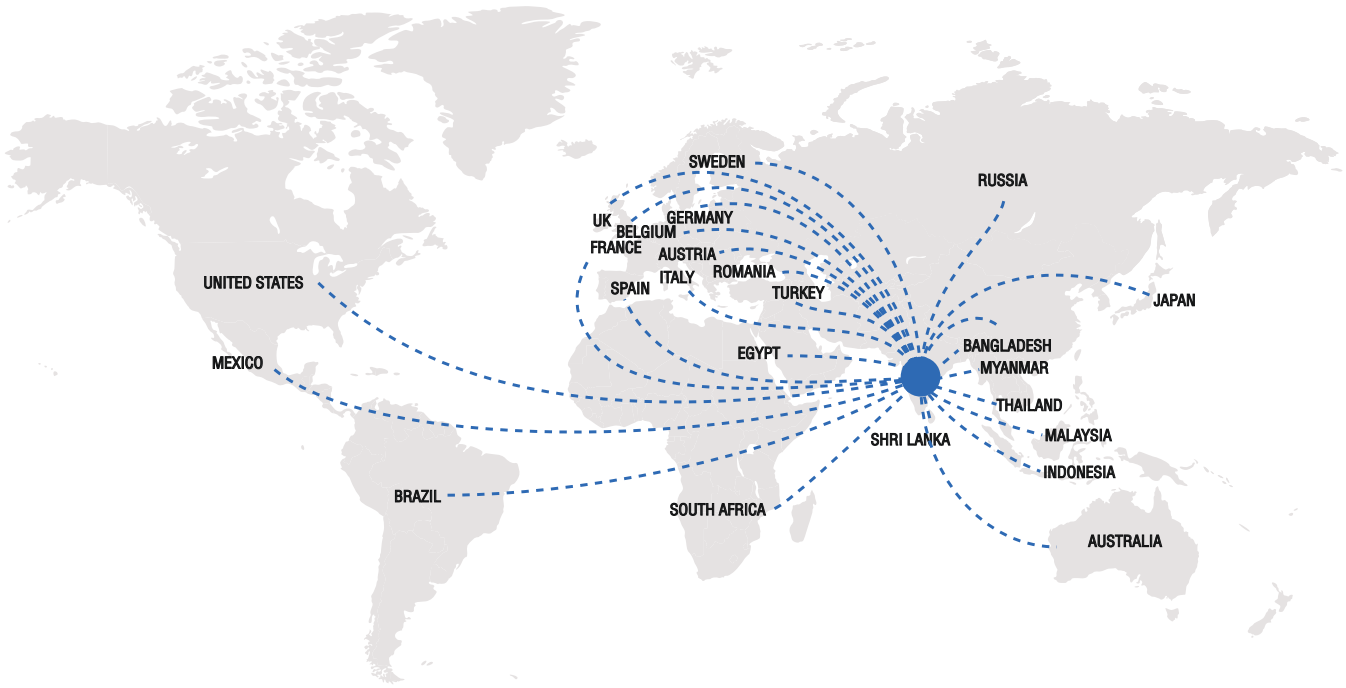


*Oman houses our Foundry business through a subsidiary company Dunes Oman
**Indonesia's presence is through a dedicated contracted plant

EXPORTS

Our products have a global market presence, and we are catering to global customers across 27 countries.

BRAKE DIVISION AND FOUNDRY DIVISION



PARTNERSHIP AND ASSOCIATIONS

Technical Partnership	Membership Associations
• KLAM • ZF • Astemo • Hitachi Metals Limited • Advics • Meritor	• Automotive Component Manufacturer Associations (ACMA) • Confederation of Indian Industry (CII) • Madras Chambers of Commerce (MCC) • Institute of Indian Foundrymen (IIF) • Industrial Waste Management Association (IWMA)

GOVERNANCE FRAMEWORK

Our standards of corporate governance are based on the principles of trust and accountability, facilitating partner-like relations with all our stakeholders. We effectively implement our principles by conducting business ethically, with integrity, fairness, and transparency, by upholding legal mandates, and by disclosing relevant information in the public domain. We are committed to setting the highest standards of good governance through support for our corporate governance principles, code of conduct, and financial ethics.

BOARD OF DIRECTORS

Our Board of Directors, consisting of seven members possesses the requisite expertise and experience to facilitate our growth and enhance the quality of our decision-making process. We strive to make informed decisions by thoroughly deliberating and considering all viewpoints presented by our directors before accepting the optimal one.

The Board conducts regular meetings to discuss and align strategic, operational, and financial matters.

Mr. R. Ramanujam
Executive Chairman

Mr. S. Viji
Executive Vice Chairman

Mr. Sriram Viji
Managing Director

Mr. R. Srikanth
Director

Mr. T. T. Srinivasaraghavan
Director

Mr. Sampath Ramesh
Director

Mr. Shekar Viswanathan
Additional Director

BIPL COMMITTEES

- Sustainability Committee
- Remuneration Committee
- Internal Controls Committee
- Corporate Social Responsibility Committee
- Health, Safety & Environment Committee
- POSH Committee

BIPL POLICIES

Our company operates based on a defined set of policies and codes, which are aligned with our core values and vision for ethical governance. These policies serve as a guidebook for our daily operations, outlining how we interact with our staff, vendors, contractors, and other stakeholders. We engage in ongoing discussions with key stakeholders to gather feedback and insights that help us identify potential areas for policy development in the future. By adhering to these policies, we are confident that we can sustain our well-intentioned prosperity over time. Our commitment and persistent efforts to uphold ethical practices also contribute to the broader community.

We have the following policies:

01 Brakes India Code of Conduct

02 Code of Conduct for Business Partners

03 Occupational Health, Safety, & Environmental Policy

04 Energy Policy

05 Corporate Social Responsibility (CSR) Policy

06 Quality Policy

07 TPM Policy

08 Whistle Blower Policy

09 Business Ethics Policy

10 Water Management Policy

11 Waste Management Policy

12 PoSH Policy

13 Human Rights Policy

14 ISMS Policy

Sustainability at BIPL

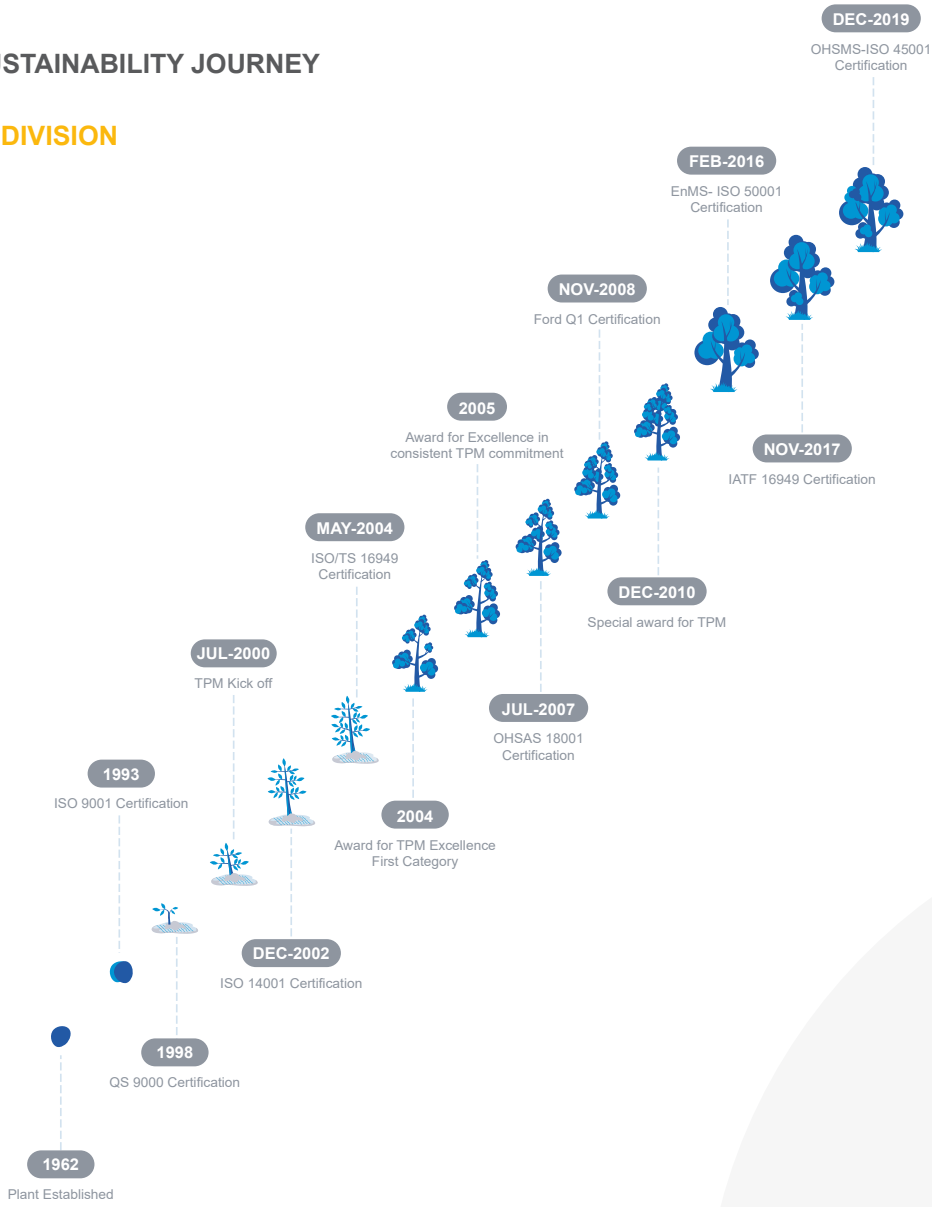
OUR THEME: "TRANSITION TO ENHANCE SUSTAINABILITY"

Brakes India prioritises conducting business in the most sustainable manner, and our actions reflect the same. Sustainability, over the years, has always co-existed within our industrial ecosystem in various forms. Although sustainability has recently gained traction, it has been our way of conducting business since our inception. To name a few initiatives, we reuse the return sand from our Foundry Division as a construction material within our facilities; we also repurpose the wooden packaging boxes and convert them into usable furniture; and we recycle all the swarf from our Brakes Division back into the process of our foundry manufacturing. Now is the moment to take it to the next level by enhancing our efforts to become an industry leader in sustainable development through the theme of "Transition to Enhance Sustainability".

We at Brakes India always believe that sustainable development can only be achieved by taking this journey together with our key stakeholders and making every effort to exceed their expectations. Now with the arising regulations and competitive business requirements, we strive to enhance and structure our sustainability initiatives, actions, goals, and performance. We are transitioning into this phase by developing our systems and processes, guided by our policies and code of conduct. We ensure that our stakeholders are presented with data that is accurate and consistent through our sustainability report.

OUR SUSTAINABILITY JOURNEY

BRAKE DIVISION



OUR SUSTAINABILITY JOURNEY

FOUNDRY DIVISION

SUSTAINABILITY COMMITTEE

At our company, we recognise the importance of sustainability and strive to integrate it into all aspects of our operations to achieve long-term benefits. Our goal is to grow and transition into a sustainable company by promoting social welfare, environmental protection, and preservation.

To achieve this vision, we have established a robust structure for sustainable governance, with cross-functional senior leadership overseeing sustainability at the board level. We have a dedicated 'Sustainability Committee' to ensure that sustainability is ingrained in our business operations. This department is responsible for overseeing and implementing our strategic sustainability vision, including setting targets and developing a roadmap for achieving our sustainability goals. They also monitor our progress towards these targets and identify areas for improvement.

By keeping sustainability at the core of our business strategy, we believe that we can achieve long-term success while contributing to a better future for everyone. Our commitment to sustainability is a fundamental aspect of our corporate identity and guides our decision-making at all levels.

The department is led by our Managing Director and is made up of members from various business units. Designated members from across the company support the 'Sustainability Committee'.

The following page has a representation of our 'Sustainability Committee' in charge of overseeing sustainability activities across all functions.

SUSTAINABILITY COMMITTEE

STAKEHOLDER ENGAGEMENT AND MATERIALITY ASSESSMENT

Effective stakeholder engagement forms the cornerstone of our business strategy and has played a crucial role in the success of our leadership in the Indian automotive industry. Our collaborative approach involves regular interaction with internal and external stakeholders who are selected based on their relevance in generating value. Through this engagement, we identify both short-term operational and long-term strategic issues that may impact our performance across environmental, social, and economic indicators in line with our aim to enhance sustainability. We prioritize the protection and creation of value across all capitals, and hence, maintain close engagement with stakeholders on matters of mutual interest. To ensure that we are responsive to stakeholder opinions and concerns, we leverage various engagement channels and actively seek feedback. We use this input to develop appropriate action plans and continuously update and improve our strategies based on diverse viewpoints and experiences. By incorporating new information and considering stakeholder perspectives, we strive to enhance our performance and achieve our shared goals. We communicate with them frequently to comprehend their issues and find solutions by using a strong stakeholder management approach as follows:

INTERNAL STAKEHOLDERS

Stakeholder Group	Communication Channel	BIPL Value Proposition
Board members	Keeping in mind accountability and responsiveness, we have periodic discussions with the board considering the interests of all stakeholders, publishing transparent and fair annual reports and carrying out CSR initiatives to help our communities.	The board is vital for Brakes India for protecting shareholder interests, establishing policies for management, oversight of the organization, and making decisions about important matters that require the company's attention.
Business Units and Site Heads	Directors have meetings/ discussions to plan new business strategies, improvise the status of existing business, objectives, statutory requirements, assess customer needs, sustainability issues and other challenges faced by the company.	Business Unit heads work in tandem with Site Heads to maintain an overall oversight on operations, lay out roadmaps, understand customer needs, set business targets, etc. We believe Business Unit and Site Heads are extremely crucial stakeholders.
Department Heads	All department heads reports to Business Unit and Site Heads in routine meetings.	A Department Head is an important leader with managerial and fiscal responsibilities for a designated area, such as a department, division, unit, or center. They provide local oversight to achieve the desired results.
Staff	All staff members are kept in loop with all developments, management's vision, and decisions through organizational update channels, meetings, and discussions.	Supervisors and managerial staff are important to Brakes India as they are at the forefront, implementing the management's vision, directives and communicating business strategies to the workmen for effective implementation.
Workmen	Workmen are made aware of their role, immediate responsibilities as well as training on various aspects of safety, quality, delivery through training workshops, circulars, meetings and so on.	Workmen are critically conducive to facilitating successful functioning of an organization. The employees play a vital role in defining the quality of the workplace and their unwavering support act as an inevitable push for our growth.
Employees Union	Raising the voice of the workmen with Brakes India senior management through discussion and negotiation.	Working for the common goal to balance the rights and responsibilities of all stakeholders, the Brakes India Employees' Union is a cooperative association.

EXTERNAL STAKEHOLDERS

Stakeholder Group	Communication Channel	BIPL Value Proposition
Statutory Bodies	In-person meetings as part of site visits, expansion projects, increasing the volume of the business through signatory authority for ensuring that necessary statutory requirements are fulfilled.	Brakes India considers Statutory bodies as critical stakeholders of the business.
Customers	We interact with our customers through one-on-one conversations, fostering space for discussions, mail correspondence, and feedback mechanisms.	Customers are the backbone of any business, and we strive to make our products and services as accessible and affordable for our customers as can be.
Suppliers	We communicate with our suppliers through periodical discussions, supplier assessments, performance evaluation, training sessions, and mail correspondence.	We see our suppliers as valuable partners in our value chain and treat them at par with our customers.
Communities	We consider all concerns raised by our communities during establishment or expansion of business activities. We have two-way discussions with them to ensure that both parties can benefit from Brakes India's business commitments.	An empowering environment is born out of mutual trust and respect, which speaks to the importance of community development. Keeping this in mind, Brakes India honors their communities.
Certification body/ statutory assessment	We respect third party assessment processes and ensure that we comply with all requirements to validate the quality, environment, health & safety, energy systems and finance related matters of our company.	Reputable assessors are important as they can provide assurance of an organization's systems, statements based on objective evidence and independent opinion. It benefits the company in several ways, such as maintaining consistency, rectifying mistakes, and fine-tuning systems. Brakes India always welcomes and treats auditors' findings as value added inputs.

COLLECTIVE BARGAINING AGREEMENTS

Brakes India abides by all permanent regulations in letter and intent while employing unionised labour. We adhere to the Industrial Disputes Act, 1947, in all our labour relations. Most of the working group members (blue-collar workers) are covered under the collective bargaining agreements. The agreements, including elements of workers' safety, welfare, and wages, are mutually agreed upon by the union leaders and the company's senior management. Unit Union meetings are conducted across all facilities to understand the grievances of all the working group members.

MATERIALITY ASSESSMENT

At BIPL, we recognise that achieving sustainable, inclusive, and green growth requires a holistic approach that goes beyond merely addressing present issues with our operations and strategy. It extends to our dedication to follow the path to sustainability. We conduct regular materiality assessments to identify the ESG issues that have a direct or indirect impact on our company's operations and footprint in terms of environmental, social, and governance considerations.

These material assessments are crucial for defining the ESG issues that are most significant to both our company and our stakeholders. We completed a materiality assessment in the current fiscal year, and we will continue to conduct them every three years. These assessments are conducive to ensuring that our ESG strategy remains relevant and responsive to the evolving needs and expectations of our stakeholders.

Our commitment is rooted in our desire to create value for all our stakeholders, including customers, employees, shareholders, and the communities in which we operate. We aim to build a more resilient and sustainable future for our company and the world around us.

PROCESS OF MATERIALITY ASSESSMENT

OUR MATERIALITY ASSESSMENT IS A 3 STEPS PROCESS AS FOLLOWS.

1. Stakeholder Identification
2. Creating a Bucket-list of Material Topics based on ESG frameworks and Peers
3. Prioritisation of Material Topics

The company has identified ten material topics that are important to its business and stakeholders through stakeholder engagement initiatives and changes in the external operating environment. The identified ten-material topic has been categorised into the following three sustainability pillars.

PILLAR 1: RESPONSIBLE BUSINESS

1. Corporate Governance
2. Business Ethics

PILLAR 2: SUSTAINABLE ENVIRONMENT

1. Environmental Policy & Management Systems
2. Energy Management
3. Emission Management
4. Water Management
5. Waste Management

PILLAR 3: CARE FOR PEOPLE

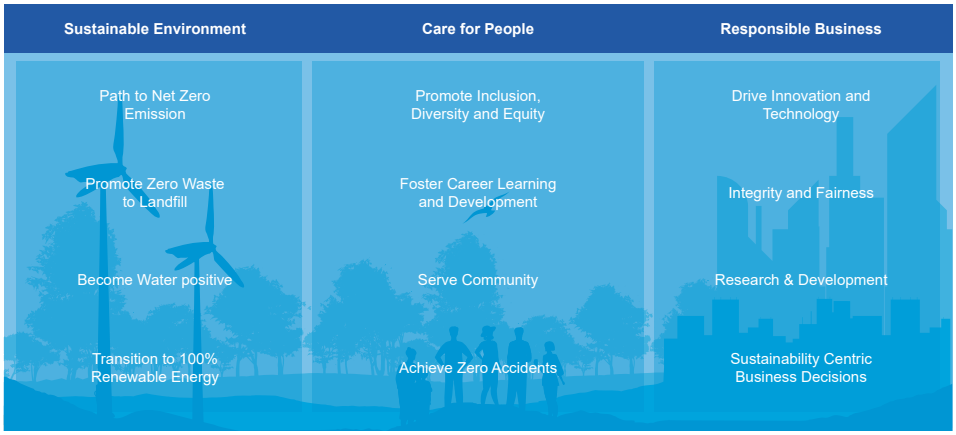
1. Occupational Health and Safety
2. Training and Education
3. Corporate Social Responsibility (CSR)

SUSTAINABILITY STRATEGY

At Brakes India, sustainability is considered not only as a key to delivering superior value to all our stakeholders but is a top priority in everything that we do – right from business strategy to carrying out daily business operations. Our strategy enables us to achieve our sustainability goals and keep our stakeholders informed of the progress and achievements in enhancing our sustainability performance.

BRAKES INDIA - SUSTAINABILITY STRATEGY

TRANSITION TO ENHANCE SUSTAINABILITY



Our strategy is designed with a focus on "Transitioning to enhance sustainability" that encompasses all our efforts that create business impact with governance and thought leadership, thereby enabling us to effectively report and disclose information to our stakeholders.

SUSTAINABLE DEVELOPMENT GOAL (SDG) MAPPING

Sustainability Pillar	Material Topic	SDG's Impacted
Responsible Business	Corporate Governance	• SDG 8: Decent Work and Economic Growth • SDG 10: Reduced Inequalities • SDG 12: Responsible Consumption and production • SDG 16: Peace, Justice, and strong Institution
	Business Ethics	
Sustainable Environment	Environmental Policy & Management Systems	• SDG 6: Clean Water and Sanitation • SDG 7: Affordable and Clean Energy • SDG 9: Industry, Innovation, and Infrastructure • SDG 12: Sustainable Consumption and Production • SDG 13: Climate Action • SDG 14: Life Below Water • SDG 15: Life on Land
	Energy Management	
	Emission Management	
	Water Management	
	Waste Management	
Care for People	Occupational Health and Safety	• SDG 1: No Poverty • SDG 2: Zero Hunger • SDG 3: Good Health and Well-being • SDG 4: Quality Education • SDG 5: Gender Equality • SDG 6: Clean Water and Sanitation • SDG 8: Decent Work and Economic Growth • SDG 10: Reduced Inequality • SDG 11: Sustainable Cities and Communities
	Training and Education	
	Corporate Social Responsibility	

RESPONSIBLE BUSINESS

As a responsible company, we at Brakes India have committed to upholding our ethical business practices founded on transparency, integrity, fairness, professionalism, and accountability to win the trust of our diverse stakeholders and pave the road for our long-term success and value creation. The Code of Conduct supports our dedication to conducting business in accordance with the highest ethical standards. Compliance with laws, risk management systems, and ethical business practices always stays at the centre of our business decisions.

CORPORATE GOVERNANCE

- **RISK MANAGEMENT**

Foreseeing future risks, challenges, and opportunities is imperative for businesses in a constantly changing business and regulatory environment. The ability to always retain a full grasp of the risks, challenges, and opportunities that the company faces is a crucial strategic factor for Brakes India. As a manufacturing business unit, we at Brakes India have a robust risk management system in place to address any potential risk that might have an impact on our business operations. The robust risk management system at Brakes India, driven by the 'Internal Control Committee (ICC)' promptly detects risks, challenges, and opportunities for our business operations and informs board members and stakeholders about the identification, assessment, and mitigation measures. The ICC periodically meets to create strategies to reduce these risks under the direction of senior management. As a futuristic company, we also have a 'Disaster Management Plan' in place to handle any unforeseen instances.

- **REGULATORY COMPLIANCE**

Ensuring compliance with rules and regulations is always a top priority for Brakes India. All our manufacturing facilities comply with all the environmental and social laws, rules, and other regulations set forth by the Indian government. Our Internal Control Committee (ICC) continuously monitors and ensures strict adherence and legal compliance all year around. An extensive 'Internal Compliance Controller System' is in place to assure the effective operation, fulfilment of legal requirements, and risk reduction of these compliance criteria. Updates on operational, employee, legal, and financial requirements across Brakes India manufacturing facilities are periodically monitored and communicated through the 'Internal Compliance Controller System'. We also ensure the integrity and compliance of our suppliers through a well-defined systematic criterion through which all suppliers are assessed to ensure compliance. Our Sourcing and Supplier Quality Assurance teams ensure the compliance and integrity of our suppliers.

In the current reporting period, there have been no instances of non-compliance by any regulatory agency for violating any laws or regulations. The ICC reviews compliance reports frequently to look for laws that apply to BIPL and to provide a clear procedure for handling any non-compliance. Any pertinent discoveries of unethical behavior/non-compliance are immediately brought to the attention of senior management and necessary remedial measures are implemented. We frequently enact new laws, which enables us to easily adapt to a dynamic regulatory environment. Throughout the year, there are numerous Board and committee meetings conducted across senior management level to maintain continuous communication and compliance with recently established laws.

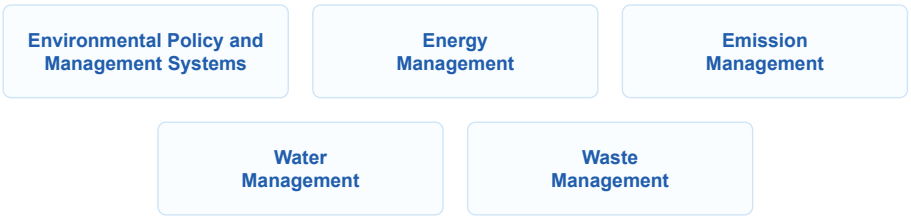
- **BUSINESS ETHICS**

An ethical perspective, fairness, and integrity in business activity are prerequisites for building confidence with all stakeholders. The overarching goal of our endeavour is to uphold moral behaviour among our stakeholders. Our code of conduct, establishing our core values and mission, serves as a cornerstone for our ethical behaviour. All the employees and board of directors working at Brakes India are required to abide by the company's code of conduct, and they are frequently informed about the company's mission, values, and ethics.

We have a 'Whistle Blower' policy and mechanism in place to identify and report any instance of unethical behaviors. Our Whistle Blowing Mechanism allows employees and directors to report incidents of fraud, violation, and unethical behavior (actual or suspected). Only selected people in senior management have direct access view and take actions on registered cases, if any. The confidentiality of the reported person is maintained. In the current reporting period, there have been no instances of unethical behavior including corruption and anti-competitive behavior. We do not encourage any unethical behaviors violating our code of conduct and stringent actions are taken against people whose actions violate it.

SUSTAINABLE ENVIRONMENT

MATERIAL TOPICS COVERED



Sustainable Environment is one of top priorities and a key material issue to Brakes India. Our care towards the environment is driven by a top-down approach, led by our leadership function and the sustainability committee that drives our sustainability strategies. We, at Brakes India, are conscious of our activities and the environmental impact created because of these activities. As a result, we are committed to minimizing our negative environmental effects by adopting the best practices and implementing the latest technologies. Our proactive approach enables us to develop innovative solutions driven by technological interventions. Supported by our policies and processes we place high emphasis on the management of energy, emission, water, and waste along with the use of sustainable technologies and systems.

ENVIRONMENTAL POLICY AND MANAGEMENT SYSTEMS

The environment is the core of our business decisions, and we are committed to reducing the adverse environmental impacts of our business operations throughout our value chain. We comply with all the legal environmental requirements of the state and central pollution control board through our entrenched environmental policy and management systems. In the current reporting period, we have not received any non-compliance with regards to the environment.

ENVIRONMENTAL POLICIES

We conduct ourselves according to a defined set of policies to take care of our environment without compromising on business opportunities and needs. The following environmental policies serve as a roadmap for all our business activities, and we are always looking for ways to increase and review our policies based on stakeholder expectations and changing business requirements.

- Occupational Health, Safety, and Environmental Policy
- Energy Policy

ENVIRONMENTAL CERTIFICATIONS

As a pledge to be an environmentally conscious business, we have the following certifications, and we are ceaselessly working to increase our certifications and coverage to all plants.

	Certification	No. of Plants	
		Brake Division	Foundry Division
ISO 14001:2015	Environmental Management Systems	13	4
ISO 45001:2018	Occupational Health and Safety Management Systems	13	4
ISO 50001: 2018	Energy Management Systems	6	4
	Green Company - Platinum	-	2
	Green Product – Eco Labelling	-	4

INTEGRATED MANAGEMENT SYSTEMS (IMS)

We have well-established Integrated Management Systems (IMS) in place that are routinely updated to satisfy the various environmental management needs of stakeholders and the constantly evolving business environment. Our Integrated Management Systems (IMS) include 'Environmental Management Systems' (ISO 14001) and 'Occupational Health and Safety Management Systems' (ISO 45001). We have a dedicated team at each of our manufacturing facilities that is responsible for the implementation of IMS. Through this system, we can evaluate our environmental risks and the effects of them on our value chain.

In the start of every financial year, HSE objectives are set for every manufacturing facility based on their need and areas of improvement. FY 2023-24, we had taken several objectives and completed most of the objectives. The pending objective will be completed in the next financial year. The progress of the set objectives and areas of improvement are discussed in every 'Management Review Meetings (MRM)' that comprised people from 'Sustainability Committee' and senior management. MRM occurs once in four months.

EDUCATION ON ENVIRONMENT, SUSTAINABILITY

BIPL offers HSE education and awareness training to employees and other stakeholders to improve the overall environmental performance of the organization and local communities. We offer training on the following topics.

- Sustainability awareness program
- IMS Awareness Program
- Ozone Day Awareness Program
- Handling of Hazardous Waste Program
- Water Conservation Program
- Awareness on Human Right, Ethics, Whistleblower & BI Code of Conduct Policy
- Handling of Hazardous Chemical program
- IMS Internal Auditor Training Program
- Energy Management System Awareness
- Energy Management System – Internal Auditor Training Program

We strive to achieve ESG perfection, and we periodically monitor and evaluate our sustainable performance throughout our value chain. ESG is ingrained in business decisions throughout our value chain. We are constantly increasing our investments to achieve net zero emissions, zero waste to landfill, transition to renewable energy, and water positive. Our aim is to achieve sustainable development

ENERGY MANAGEMENT

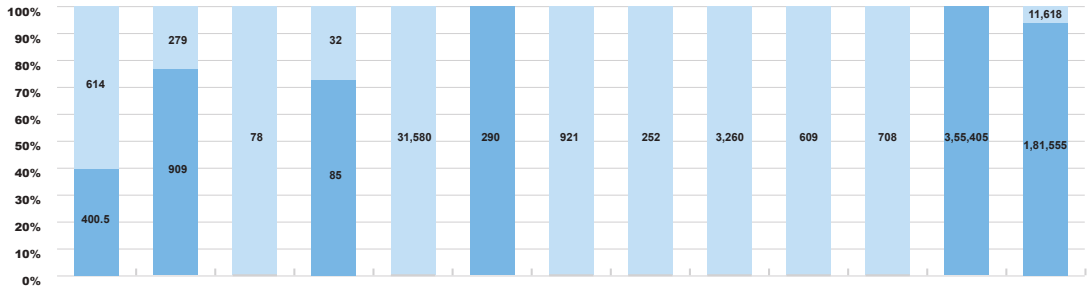
The nation's energy intensity and emissions intensity can be reduced by increasing energy efficiency measures and promoting low-carbon growth. Energy is an important driver for our business operation to achieve Net Zero emissions, and we're committed to using it efficiently and wisely. Our approach to energy management is always proactive, structured, and methodical. We meticulously plan our energy production, delivery, and consumption to satisfy demand while also taking environmental and financial goals into account. The two main factors influencing our decision to minimize GHG emissions from our industrial activities are the energy efficiency of our processes and the growing utilization of renewable energy.

We have a dedicated 'Energy Policy' to drive our actions. We have ten sites (six in Brake Division and four in Foundry Division) that are certified for ISO 50001 (Energy Management Systems) and we have plans to extend the coverage of ISO 50001 certification to other sites as well. Our Energy Management System (EnMS) has been established on PDCA (Plan-Do-Check-Act) cycle framework as follows.

- **Plan :** A dedicated energy management team has been appointed to oversee energy-related activities, and they will ensure compliance with our energy policy. We will be identifying areas where energy consumption is significant and prioritizing the opportunities for energy performance improvement based on the periodic reviews of Energy Performance Indicators (EnPIs), and Objectives set and its performance.
- **Do :** The stated objectives will be implemented across our manufacturing facilities and our energy management team will ensure energy conservation in our entire value chain based on our energy policy
- **Check :** Frequent internal audits and planned external audits will be carried out to ensure compliance across all our plants. The audits help us to verify that the energy management system is functioning properly and generating the projected results.
- **Act :** The results of the audits are discussed in our Management Review Meetings (MRMs), which occur once in every four months. Based on the progress, suitable energy-relevant processes are optimized, and new objectives are set.

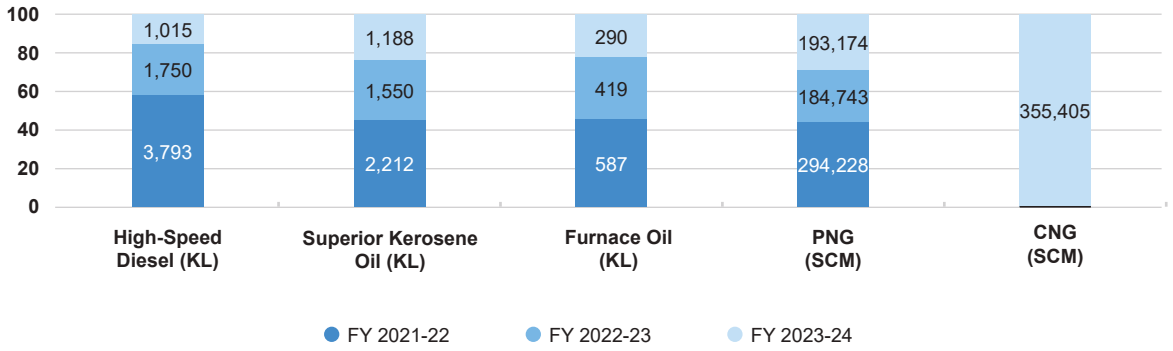
DIRECT ENERGY CONSUMPTION (SCOPE1)

In the current reporting period, we have internally consumed the following type of energy to cater to our business needs.



	High-Speed Diesel KL	Superior Kerosene oil KL	Pyroil KL	LPG MT	Acetylene Gas M³	Furnace oil KL	Coke Low Ash MT	Coke High Ash MT	Coconut Shell MT	Limestone MT	Mineral Waste Hydrocarbon Oil KL	CNG SCM	PNG SCM
Foundry Division	614	279	78	32	31,580	0	921	252	3,260	609	780	0	11,618
Brake Division	400.5	909	0	85	0	290	0	0	0	0	0	3,55,405	1,81,555
Total	1,014.50	1,188	78	117	31,580	290	921	252	3,260	609	780	3,55,405	1,93,173

TREND OF DIRECT ENERGY CONSUMPTION OF SIGNIFICANT FUELS (SCOPE 1)

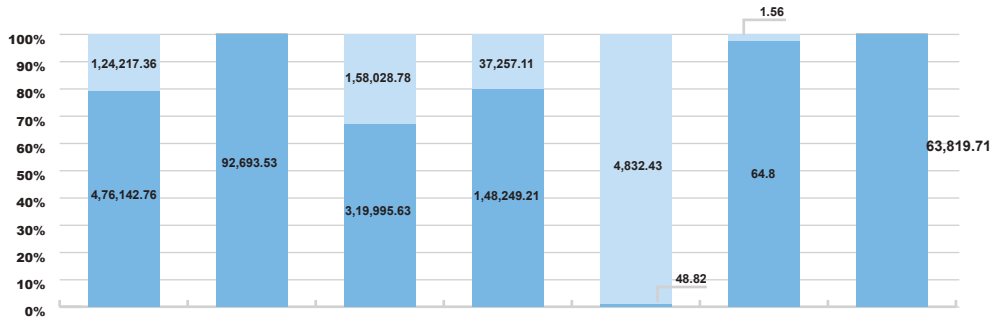


- **High-Speed Diesel :** In FY 2023-24, there is a decrease of 2,778 KL (73% reduction), when compared with base year FY 2021-22.
- **Superior Kerosene Oil :** In FY 2023-24, there is a decrease of 1,024 KL (46% reduction), when compared with base year FY 2021-22.
- **Furnace Oil :** In FY 2023-24, there is a decrease of 297 KL (51% reduction), when compared with base year FY 2021-22.
- **PNG :** In FY 2023-24, there is a decrease of 1,01,054 SCM (34% reduction), when compared with base year FY 2021-22.
- **CNG :** In FY 2023-24, there is an increase of 3,55,405 SCM, when compared with base year FY 2021-22.

INDIRECT ENERGY CONSUMPTION (SCOPE 2):

In FY 2023-24, we purchased energy from the grid and other third parties as follows.

**UoM in GJ*

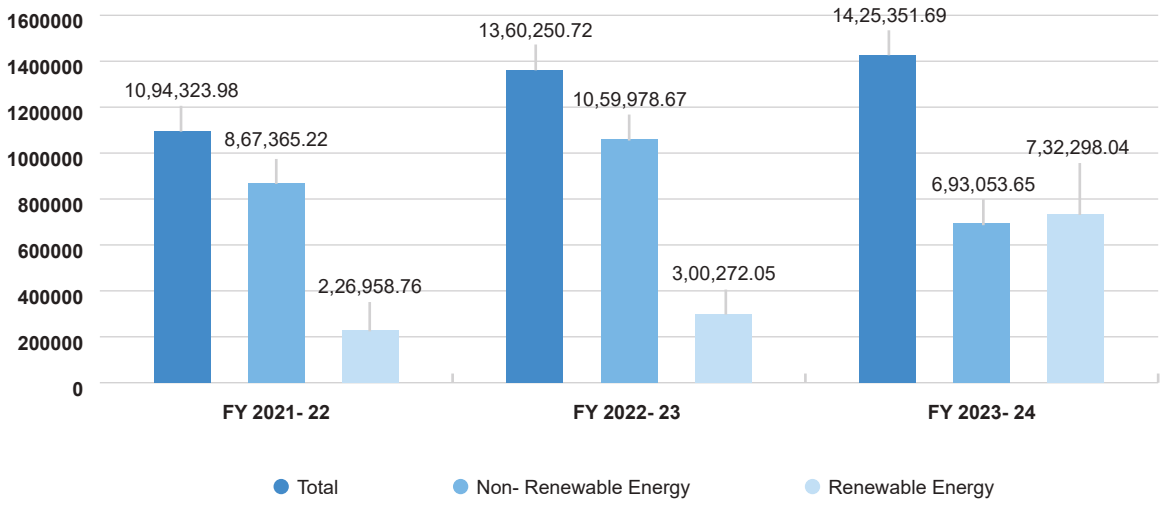


	NRE Grid Electricity GJ	NRE Natural Gas GJ	RE Wind GJ	RE Solar GJ	RE Roof Top solar GJ	Solar water heater energy GJ	RE Biomass GJ	Total
Foundry Division	4,76,142.76	92,693.53	3,19,995.63	1,48,249.21	48.82	64.8	63,819.71	11,01,014.46
Brake Division	1,24,217.36	0	1,58,028.78	37,257.11	4,832.43	1.56	0	3,24,337.24
Total	**6,00,360.13**	**92,693.53**	**4,78,024.4**	**1,85,506.32**	**4,881.26**	**66.36**	**63,819.71**	**14,25,351.7**

1 GJ (gigajoule) is equivalent to 277.778 kWh (kilowatt-hours).

TREND OF INDIRECT ENERGY CONSUMPTION (SCOPE 2)

**UoM in GJ*



• Increased Shift to Renewable Energy: In FY 2023-24, there is an increase of 1,40,372.02 MWh (about 2.2 times increase), when compared with base year FY 2021-22. This is the result of our commitment towards sustainability and reducing reliance on non-renewable energy sources.

• Reduction in Non-Renewable Energy Consumption: In FY 2023-24, there is a reduction of 48,419.88 MWh (about a 20% decrease), when compared with base year FY 2021-22 indicates an improvement in energy efficiency and deliberate shift from fossil fuels.

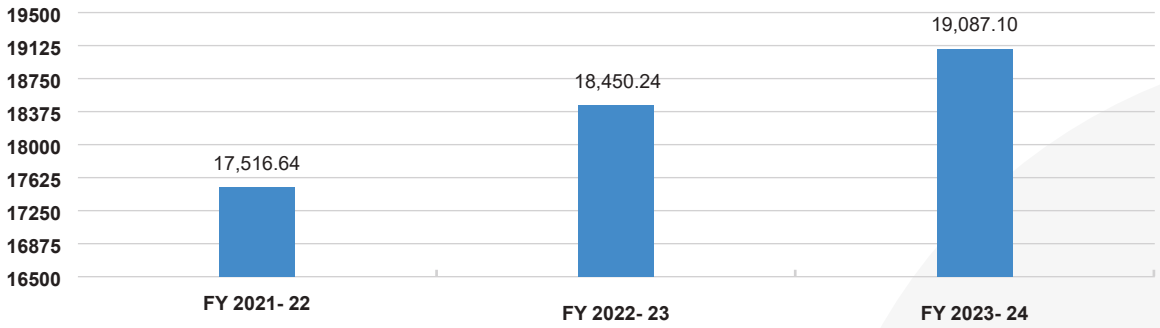
ENERGY CONSUMPTION OUTSIDE THE ORGANISATION (SCOPE 3 ENERGY)

**UoM in GJ*

	UoM	Foundry Division
Energy for Upstream Activites	**GJ**	19,087.1

TREND OF ENERGY CONSUMPTION OUTSIDE THE ORGANISATION (SCOPE 3)

**UoM in GJ*



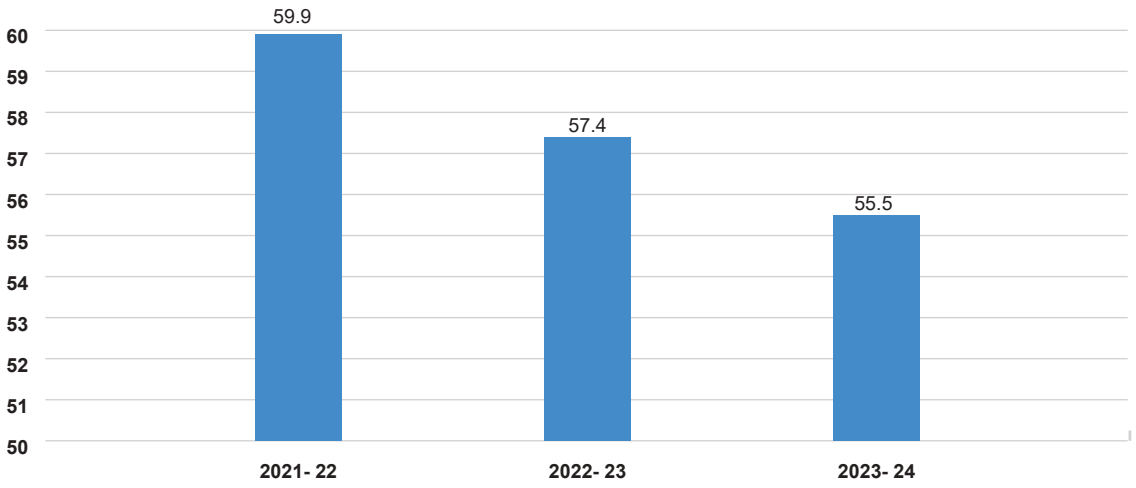
ENERGY INTENSITY

FY 2023-24, the energy intensity for BIPL is as follows.

UoM	Brake Division	Foundry Division	Total
MwH	90,094	3,05,837	3,95,931
(INR in crore)	5,438	1,696	7,134
MWh/ per crore (INR)	16.6	180	55.5

Brake Division consumed 16.6 Mwh of energy & the Foundry Division consumed 180 Mwh of Energy for every one crore (INR) in sales value.

TREND OF ENERGY INTENSITY



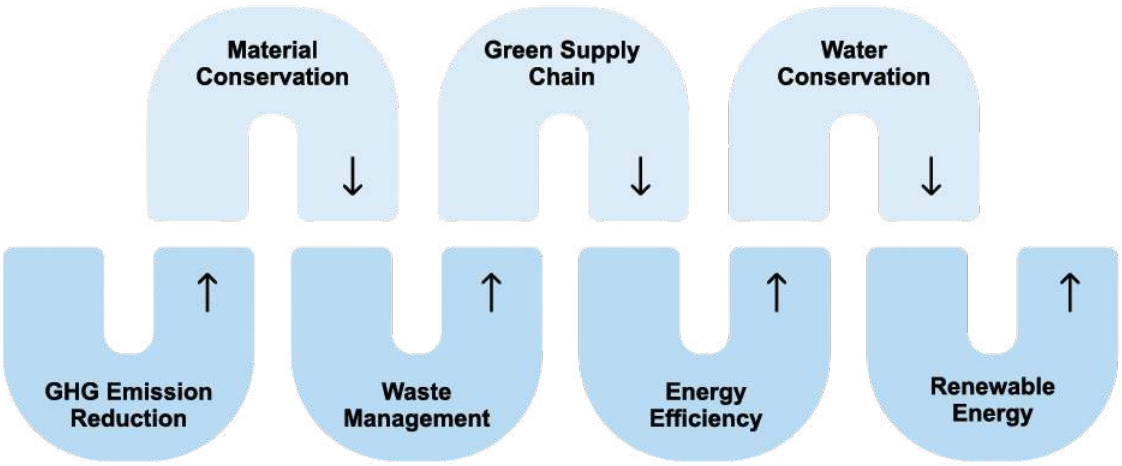
1 MWh (kilowatt-hour) is equal to 3.6 GJ (gigajoules)

For FY 2021-22 BIPL consumed 59.9 Mwh of energy, for FY 2022-23 BIPL has consumed 57.4 Mwh of Energy and for FY 2023-24 BIPL has consumed 55.5 MWh for every one crore (INR) in sales value.

In the current reporting period, we have consumed 3,95,931.03 Mwh energy through renewable and non-renewable sources.

Comparing both divisions, the Foundry Division's energy consumption is high due to its high energy-intensive business operations. Our Foundry division has three main processes such as Melting, Moulding, and Finishing. The melting process requires a temperature of 1,500 oC to be maintained in the melting furnace due to which this process alone constitutes 81 % of the total energy requirements of the Foundry Division. Foundry Division already has developed a mechanism to produce 'Green Casting' which is made by consuming 100% renewable energy which will eventually reduce its energy and emission throughout the value chain. 'Green Casting' will be deployed to our customers in the next financial year.

GREEN CASTING PROCESS



RENEWABLE ENERGY

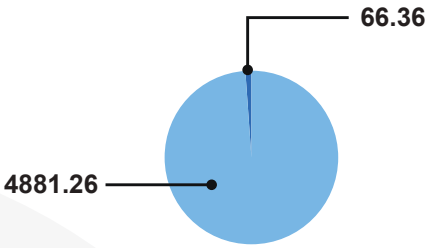
Transitioning to renewable energy is the major lever for our business operation to achieve Net-Zero emissions and we see it as an opportunity to enhance our business operations. Our long-term goal is to consume 100% of our energy requirements through renewable sources and we're working towards the same in a phased manner. In the current reporting period, we purchased/generated and consumed 7,32,298.05 GJ of renewable energy contributing to 51.38% of our total energy requirements.

1. IN-HOUSE ROOFTOP SOLAR CAPACITY

We have an in-house rooftop solar capacity of 1,180 KW as follows.

	UoM	Brake Division	Foundry Division	Total
Rooftop Solar	**KW**	1,165	15	1,180

In the current reporting period, through our rooftop solar and solar water heaters, we were able to generate and consume 4,947.62 GJ of electricity as follows:



Total Inhouse rooftop solar energy consumption in GJ (BD+FD)	
Rooftop solar (A)	Solar water heater (B)
4,881.26	**66.36**
(A) + (B) = 4,947.62	

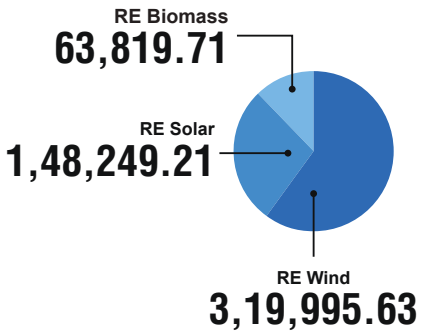
Through renewable energy generation, we were able to avoid the consumption of grid electricity thereby avoiding our Scope 2 Emissions.

2. PURCHASED RENEWABLE ENERGY

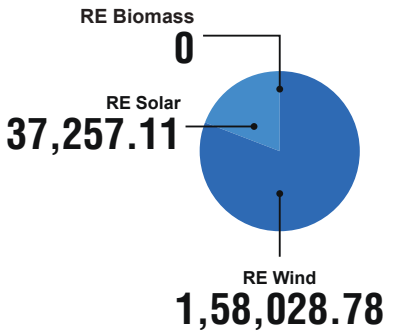
In the current reporting period, we have purchased and consumed 7,27,350.43 GJ of renewable based energy as follows..

**UoM in GJ*

Foundry Division



Brake Division



	RE Wind GJ	RE Solar GJ	RE Biomass GJ	Total GJ
Foundry Division	3,19,995.63	1,48,249.21	63,819.71	5,32,064.55
Brake Division	1,58,028.78	37,257.11	0	1,95,285.89
Total	**4,78,024.40**	**1,85,506.32**	**63,819.71**	**7,27,350.43**

Through renewable energy purchases, we were able to reduce our need for conventional energy sources, thereby reducing our emissions.

REDUCTION OF ENERGY CONSUMPTION

1. THROUGH ELECTRICITY SAVING INITIATIVES

In the current reporting period, through various electricity-saving initiatives such as, we were able to save 6969.02 GJ of electricity as follows:

	UoM	Total
Foundry Division	GJ	3,027.02
Brake Division		3,942
Total		6,969.02

2. THROUGH FUEL SAVING INITIATIVES

In the current reporting period, through various fuel-saving initiatives, we were able to save 676 KL of SKO as follows:

	UoM	Process Modification
Foundry Division	**KL**	676

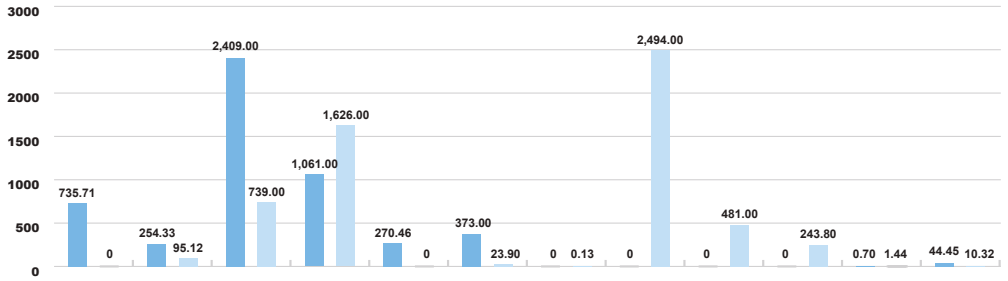
EMISSION MANAGEMENT

We recognize the significance of climate change and the importance of meeting our obligations towards it. BIPL understands that a net zero pathway does not exist without the foundation of strong GHG inventorisation and reporting. In accordance with the Greenhouse Gas (GHG) Protocol and Intergovernmental Panel on Climate Change (IPCC), we are monitoring, and reporting Scope 1 & Scope 2 emissions generated from our business operations across nineteen manufacturing facilities in India.

DIRECT EMISSION IN TONS OF CO_2 EQ. (SCOPE 1)

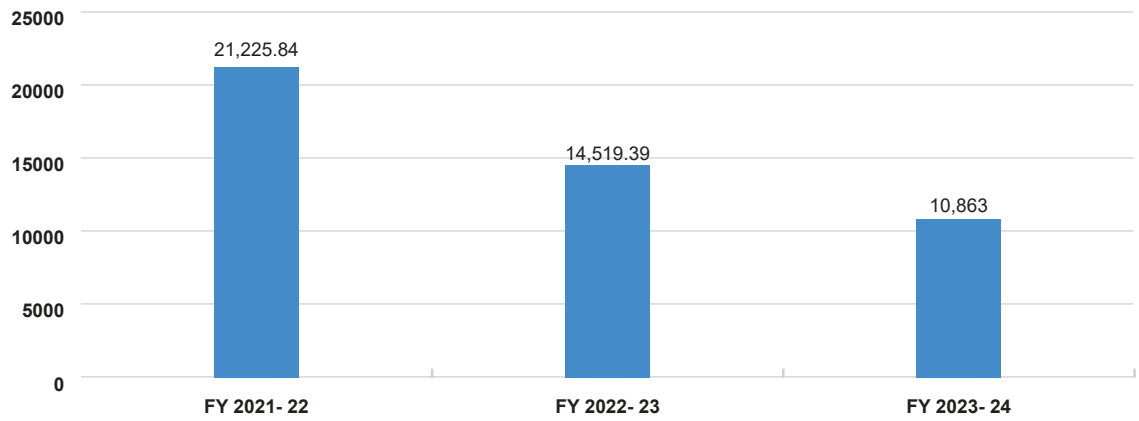
The Brake Division contributes 47% (approx.) and the Foundry Division contributes the remaining 53% (approx.) of Scope 1 emissions due to their business operations.

In the current reporting period, through our direct energy consumptions, we have emitted 10,863 Tons of CO_2 Equivalent Scope 1 emission as follows.



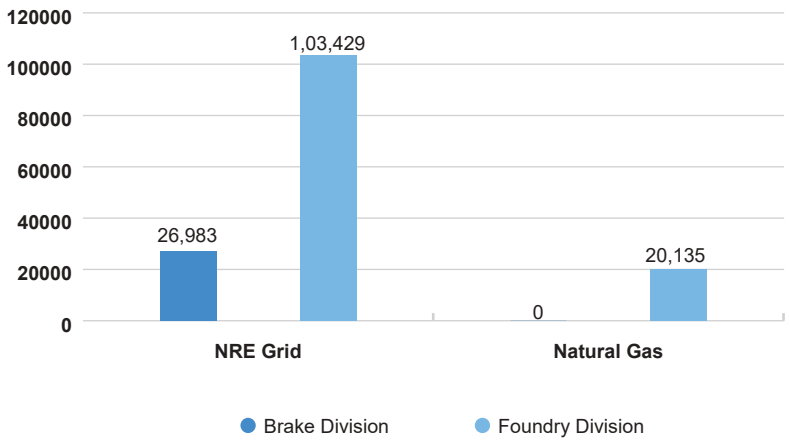
Source of emission	Furnace Oil	LPG	SKO	HSD	CNG	PNG	Acetylene	Coke-Low ash	Coke-High ash	Limestone	CO_2 From fire extinguisher	CO_2 From Processes	Total
Brake Division	735.71	254.33	2,409.00	1,061.00	270.46	373.00	0	0	0	0	0.70	44.45	5,148.65
Foundry Division	0	95.12	739.00	1,626.00	0	23.90	0.13	2,494.00	481.00	243.80	1.44	10.32	5,714.71
Total	**735.71**	**349.45**	**3,148.00**	**2,687.00**	**270.46**	**396.90**	**0.13**	**2,494.00**	**481.00**	**243.80**	**2.14**	**54.77**	**10,863.37**

TREND OF DIRECT EMISSION IN TONS OF CO_2 EQ. (SCOPE 1)



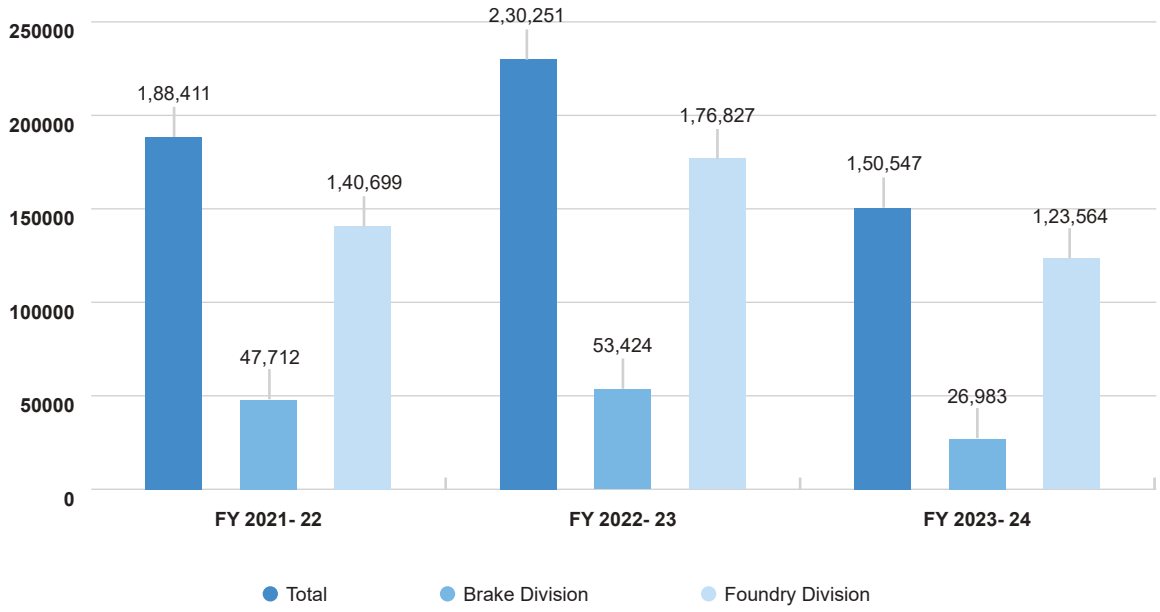
In FY 2023-24, there is a decrease of 10,363 tons of CO_2 equivalent in Scope-1 emissions & this represents a significant reduction of 49%, when compared with FY 2021-22.

INDIRECT EMISSION IN TONS OF CO_2 EQ. (SCOPE 2)



	UoM	Brake division	Foundry division	Total
NRE Grid	Tons of CO_2 Equivalent	26,983	1,03,429	1,30,412
Natural Gas		0	20,135	20,135
Total		**26,983**	**1,23,564**	**1,50,547**

TREND OF INDIRECT EMISSION IN TONS OF CO_2 EQ. (SCOPE 2)



In FY 2023-24, the total Scope-2 emissions decreased by 37,864 metric tons (approx.20% reduction), when compared with base year FY 2021-22.

EMISSION INTENSITY

In FY 2023-24, the emission intensity for BIPL is as follows.

Emission	UoM	Brake Division	Foundry Division	Total
Scope 1	**MT**	5,148	5,715	10,863
Scope 2		26,983	1,23,564	1,50,547
Total		32,131	1,29,279	1,61,410
Sales Value	**(INR in crores)**	5,438	1,696	7,134
Emission Intensity	**MT/ crore (INR)**	5.9	76	22.6

The Foundry Division releases 76 Tons of CO_2 Equivalent for every one crore (INR) in sales value and the Brake Division releases 5.9 Tons of CO2 Equivalent for every one crore (INR) in sales value.

RENEWABLE ENERGY AND AVOIDED EMISSIONS

We are progressing towards Net-Zero emissions and our actions follow our objective. In FY 2023-24, through renewable energy generation and purchase, we consumed 7,32,298.05 GJ of energy through which we avoided 1,59,071.4 Tons of CO_2 Equivalent emissions including Scope 2.

1.THROUGH IN-HOUSE RENEWABLE ENERGY GENERATION

In FY 2023-24, through our solar panels and solar water heaters, we generated and consumed 4,947.62 GJ (1374.33 MWh) of energy through which we avoided 1,074.7 Tons of CO_2 Equivalent Scope 2 emissions as follows.

	UoM	Brake Division	Foundry Division	BIPL
Scope 2 Emission Avoided through Solar Energy Generation	Tons of CO_2 Equivalent	1,050	24.7	1,074.7

2.THROUGH RENEWABLE ENERGY PURCHASE

In FY 2023-24, through our solar panels and In FY 2023-24, through renewable energy purchase, we consumed 7,27,350.43 GJ (202041.79 MWh) of energy through which we have avoided 1,57,996 Tons of CO_2 Equivalent Scope 2 emissions.

Emissions Avoided	UoM	Brake Division	Foundry Division	BIPL
Total	**Tons of CO_2 Equivalent**	42,420	1,15,576	1,57,996

EMISSION REDUCTION THROUGH ENERGY SAVING INITIATIVE

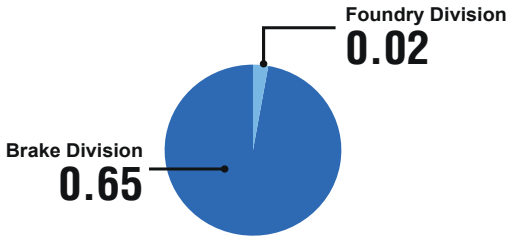
Through various fuel and electricity saving initiatives (mention under Energy Management), we were able to reduce 6,969.02 GJ for scope 1 & 676 KL for scope 2 and 3217.83 Tons of CO_2 Equivalent emissions including Scope 1 and Scope 2 emissions as follows.

	UoM	Brake Division	Foundry Division	Total
Scope 1	**Tons of CO_2 Equivalent**	0	1,704	1,704
Scope 2		856.29	657.54	1,513.83
Total		856.29	2,361.54	3,217.83

OZONE DEPLETING SUBSTANCES (ODS)

Ozone-depleting substances are man-made gases that destroy our protective ozone layer. In FY 2023-24, we consumed 0.67 Tons of ODS gases as follows.

EMISSION OF OZONE DEPLETING SUBSTANCES (MT)



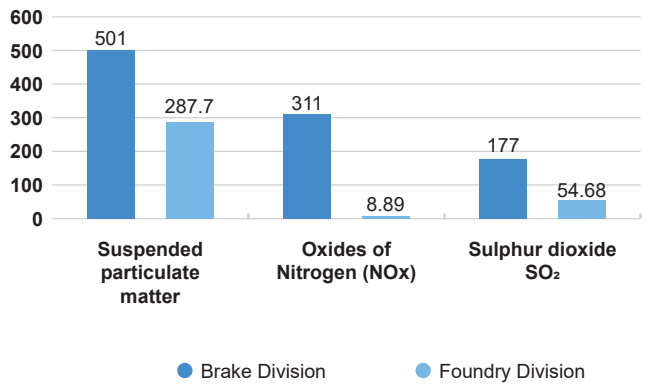
	UoM	Brake Division	Foundry Division	BIPL
Emission of Ozone depleting substances	**MT**	0.65	0.02	0.67

As an organization, we have equal responsibility in protecting our ozone layer and we will be reducing our ODS gases in a progressive way.

AIR EMISSIONS

Good air quality is crucial for a high quality of life, and a robust economy depends on it. We ensure that our operations have a minimal impact on the atmosphere by closely monitoring the release of Suspended Particulate Matter (SPM), Oxides of Nitrogen (NOx) and Sulphur dioxide (SO_2).

To ensure compliance, we monitor and ensure that our emissions remain within the limits prescribed by the Central Pollution Control Board (CPCB). We hire third-party laboratories and agencies approved by the State Pollution Control Board (SPCB) to audit our operations. We submit reports on our Air emissions to the Central and State Pollution Control Board through the Annual Environmental Statement. In the current reporting period, we released 1,340.27 Tons of Air Emission as follows.



	UoM	Brake division	Foundry division	Total
Suspended Particulate Matter (SPM)	MT	501	287.7	788.7
Oxides of Nitrogen (NOx)		311	8.89	319.89
Sulphur dioxide (SO_2)		177	54.68	231.68
Total		**989**	**351.27**	**1,340.27**

The Brake Division contributes to 74 % (approx.) of the total air emission and the Foundry Division contributes to the remaining 26 % (approx.) of the air emission.

REDUCTION OF SUSPENDED PARTICULATE MATTER (SPM) IN DIESEL GENERATORS (DG)

We have reduced the emission of SPM from our Diesel Generator (DG) sets by retrofitting 'Carbon Cutters'. We have invested INR 7 million for installing seven carbon cutters in five manufacturing facilities across Brake Division. After the installation, we were able to see a 90.5% (approx.) reduction in SPM thus enhancing the quality of air and the life of employees and communities.

Brake Division Plants	DG Set Capacity (KVA)	SPM Before Retro Fitment	SPM After Retro fitment	Percentage Reduction (%)
Padi	1,010	95.8	10.02	89.5
Sholinghur	1,010	91.8	9.2	90.0
	625	96.9	8.7	91.0
Midrange Components - I (MRC-I)	750	88.9	8.6	90.3
Midrange Components - II (MRC-II)	500	94.8	7.9	91.7
Mahindra World City	725	97.9	8.9	90.2
	625	94.3	9.2	90.2

We take our responsibility towards the environment seriously and are committed to reducing our environmental impact. By following guidelines and regulations, we strive to maintain good air quality.

Our company is committed to minimizing its environmental impact and continuously evaluates opportunities to reduce emissions across the value chain. To achieve our goals, we have undertaken further measures and are taking a proactive approach to reducing emissions as we continue to grow and operate our business.

To moderate the effect of its operations, BIPL strives to create opportunities to decrease emissions by embracing energy-efficient operations and increasing its renewable energy mix. The focus is on creating opportunities that will help in achieving net zero emissions. We have already invested in cleaner energy options and energy-efficient projects that are yielding positive results.

By taking these measures, we aim to meet our climate change targets effectively and responsibly. We are aware that reducing emissions is an ongoing process, and we are continually monitoring our progress and exploring new opportunities to further reduce our carbon footprint. We believe that our commitment to transparency and accountability will help us in achieving our goal of reducing emissions and contributing towards creating a sustainable future for all.

WATER MANAGEMENT

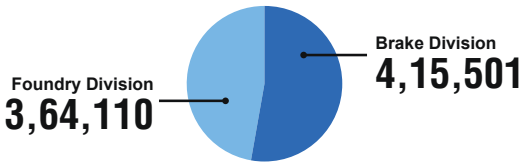
Water scarcity and rising demand for water are serious worldwide challenges that require an immediate response. We are committed to creating an ethical and sustainable approach to managing water resources, which presents both a challenge and an opportunity at all our production sites. Our main priorities are to efficiently manage our water input, abide by the regional acceptable withdrawal and discharge limits, and reduce water consumption while boosting water availability for the local communities. Our business understands the value of proper water management for sustaining our operations and addressing the world's water issues. Our ultimate objective is to adopt a water-positive mindset and commit to water accessibility, usage, and conservation.

To protect water resources and make sure that our operations do not harm natural water bodies we continually check the quality of both surface and groundwater at all our facilities. We do not have any of our nineteen facilities (19 plants in the Brake Division and 4 plants in the Foundry Division) in the water stress area.

WATER WITHDRAWAL

We extract water from sources such as groundwater, third-party water, rainwater (collected and stored by the company), and demineralized water to cater to our daily business operations. Of the total water extracted, the Foundry Division extracted 47% (approx.) and the Brake Division extracted 53% (approx.).

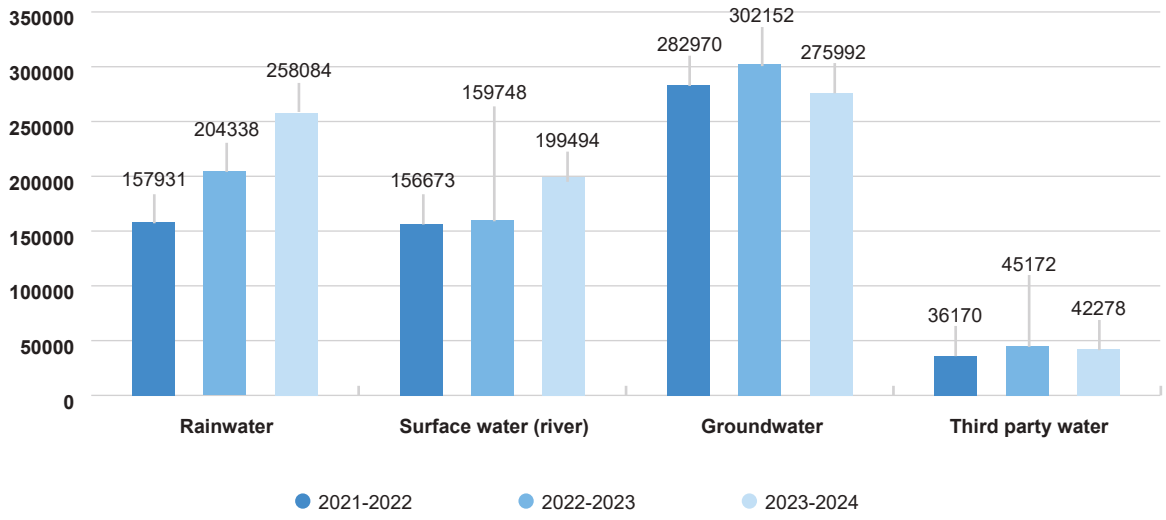
The water bodies from which the water withdrawal is made do not experience any water stress because of the operation at BIPL.



	Water Withdrawal (Kilolitres)
Brake Division	4,15,501
Foundry Division	3,64,110
Total	7,79,611

Source of Withdrawal	UoM	Brake Division	Foundry Division	Total
Rainwater	Kiloliters	94,167	1,63,917	2,58,084
Surface Water (river)		97,464	1,02,030	1,99,494
Third party water		37,797	4,481	42,278
Groundwater		1,82,310	93,682	2,75,992
Demineralized water		3,763	0	3,763
Total		4,15,501	3,64,110	7,79,611

TREND OF WATER WITHDRAWAL IN KILOLITERS



- **Rainwater** : In FY 2023-24, there is an increase of 1,00,153 KL (approx. 64%), when compared with base year FY 2021-22, showing consistent growth and a stronger reliance on rainwater harvesting.
- **Surface water (River water supply in BIN, BIJ & FDJ)** : In FY 2023-24, there is an increase of 42,821 KL (approx. 27%), when compared with base year FY 2021-22.
- **Groundwater** : In FY 2023-24, there is a decrease of 6,978 KL (approx. 3%), when compared with base year FY 2021-22, due to increase in utilisation of rainwater and surface water.
- **Third-party water** : In FY 2023-24, there is an increase of 6,108 KL (approx. 17%), when compared with base year FY 2021-22, due to addition of sites.

BEST INDUSTRIAL GARDEN AWARD

Location: Nanjangud, Brake Division

Our commitment as a responsible business continues in beautification of our factories through gardening to create a better environment for working and recreational activities. Our Nanjangud Plant, Brake Division has been exceptional in ‘Industrial Gardening’ and has won the ‘Best Industrial Garden Award’ consecutively 22 years through ‘DASARA Flower Show’ which is conducted by Horticulture Department of Karnataka.

SEWAGE AND EFFLUENT TREATMENT

Our objective is to achieve water positive. In accordance with our objective, we have implemented Zero Liquid Discharge (ZLD) systems across all our facilities, either through onsite treatment or offsite treatment (sending Sewage and effluent to Common Effluent or Sewage Treatment Plants for further treatment). We do not release even a single drop of sewage or effluent to the nearby water bodies or ground, and we adhere to all the local and national Pollution Control Board rules and regulations.

Most of our plants have in-house treatment systems to treat sewage and effluent. One of our Brake division plants located at Mahindra World City, Chennai (Special Economic Zone) has in-house treatment facilities to treat Sewage and Effluent as well it sends the remaining sewage to Common Sewage Treatment Plant for further treatment.

We are enhancing water productivity by reducing the intake of fresh water and reusing it, plus recycling to ensure water security at each of our locations. We have a cutting-edge sewage and effluent treatment system across all our facilities.

Recycle water	UoM	Brake Division	Foundry Division	BIPL
Water recovered through STP	KL	1,37,818	49,140	1,86,958
Water recovered through ETP & RO Plants		1,02,455	0	1,02,455
Water recovered through Mechanical evaporator plant		14,426	0	14,426
Total		2,54,699	49,140	3,03,839

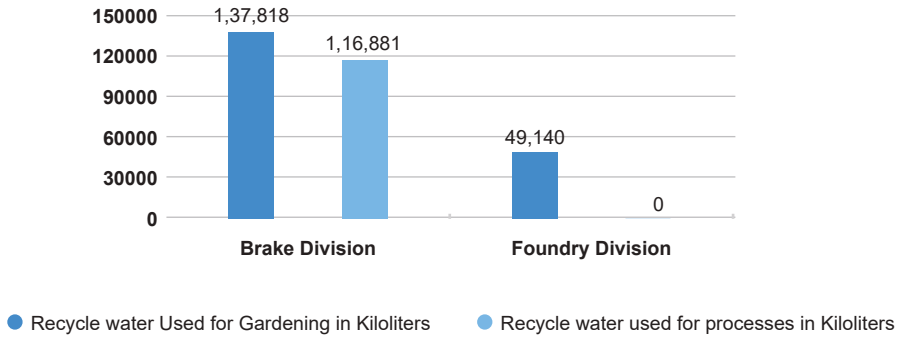
COMPARISON OF RECYCLE WATER

	UoM	FY 2021-22	FY 2022-23	FY 2023-24
Recycle water	**KL**	2,64,172	2,83,304	3,03,839

This indicates a continued focus on boosting water recycling efforts, considering environmental concerns, resource scarcity, and regulatory pressures to reduce freshwater consumption.

WATER RECYCLE AND REUSE

By using our cutting-edge water treatment systems, we have recycled the following amount of water in the reporting period:



	UoM	Brake Division	Foundry Division	Total
Recycle water Used for Gardening	Kilolitres	1,37,818	49,140	1,86,958
Recycle water used for processes		1,16,881	0	1,16,881

WATER DISCHARGE

We conduct a thorough analysis of the water before discharging. There have been no violations of the water discharge restrictions specified in the consent to operate. Four plants in the Brake Division are sending sewage and effluent to the common treatment facilities as follows and we do not discharge any untreated sewage/effluent to nearby waterbodies/ground.

Brake Division & Foundry Division Plant	Water Sent Outside	Kiloliters
SEZ	Common Sewage Treatment Plant	1,746
Sri City		4,802
Sitarganj	Common Effluent Treatment Plant	1,022
Jamshedpur		3,353

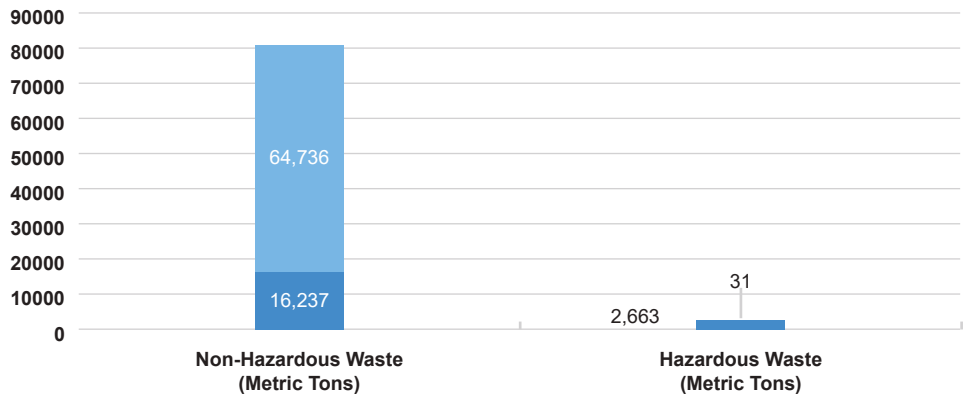
WASTE MANAGEMENT

'Waste' can be utilized as 'Wealth' if it is properly managed. An essential component of BIPL's operational eco-efficiency is waste management. The circular economy and resource efficiency are values we uphold, and this strategic focus is incorporated into every facet of our operations and administrative procedures. Our goal is to reduce waste production while putting in place reliable waste treatment and disposal systems. We will continue this work to eventually have all our manufacturing activities at the "Zero Waste to Landfill" level. Effective waste management has been more widely recognized at BIPL and we have a dedicated crew in charge of classifying, sorting, and disposing of waste in an environmentally friendly manner at each of our production facilities and administrative buildings. We have strong standards in place to make sure that our facilities follow all applicable laws set forth by the Central and State pollution control board. The usage of single-use plastic has been banned in Brakes India since 1st October 2018. Awareness programs have been conducted for all employees on waste management.

WASTE GENERATED

In the current reporting period, we have generated 83,667 Metric Tons of waste (including hazardous and non-hazardous waste) as follows.

WASTE GENERATION FY 2023-24



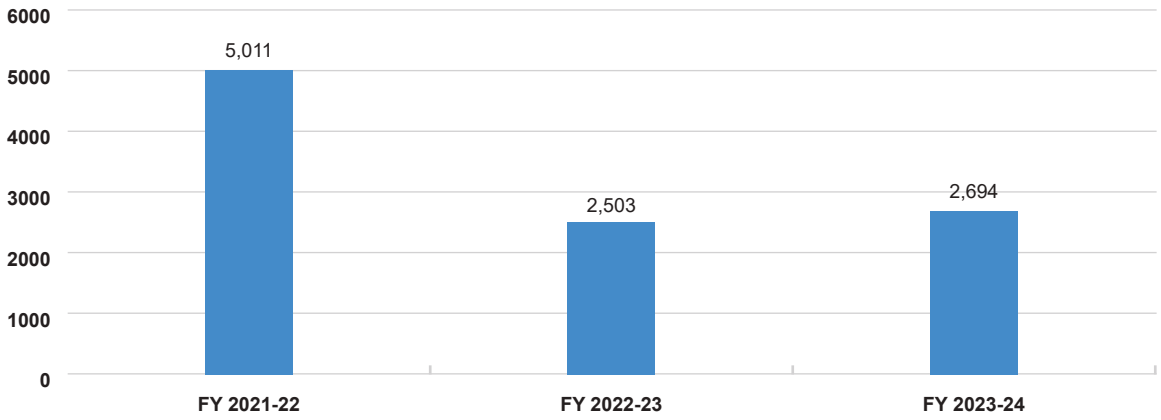
	Non-Hazardous Waste	Hazardous Waste
Brake Division	16,237	2,663
Foundry Division	64,736	31

	UoM	Brake Division		Foundry Division		Total	
		Non-Hazardous Waste	Hazardous Waste	Non-Hazardous Waste	Hazardous Waste	Non-Hazardous Waste	Hazardous Waste
Solid	Metric Tons	16,237	2,483	64,736	7	80,973	2,490
Liquid		0	180	0	24	0	204
Total		16,237	2,663	64,736	31	80,973	2,694
Grand Total		18,900		64,767		83,667	

- Of the total hazardous waste generated, the Brake Division has generated 99 % (approx.), and the remaining 1 % (approx.) has been generated by the Foundry Division. The Brake Division's major share of hazardous waste includes non-asbestos dust from the brake manufacturing process and sludge from the Electroplating process and phosphating operation. We ensure that all the hazardous waste generated is properly handled and disposed of as per the pollution control board standards.

- Of the total non-hazardous waste generated, the Brake Division has generated 20% (approx.), and the remaining 80% (approx.) has been generated by the Foundry Division. The Foundry division's major share of non-hazardous waste includes return sand, Slag, and fine dust which is used for construction purposes.

TREND OF HAZARDOUS WASTE GENERATION IN MT

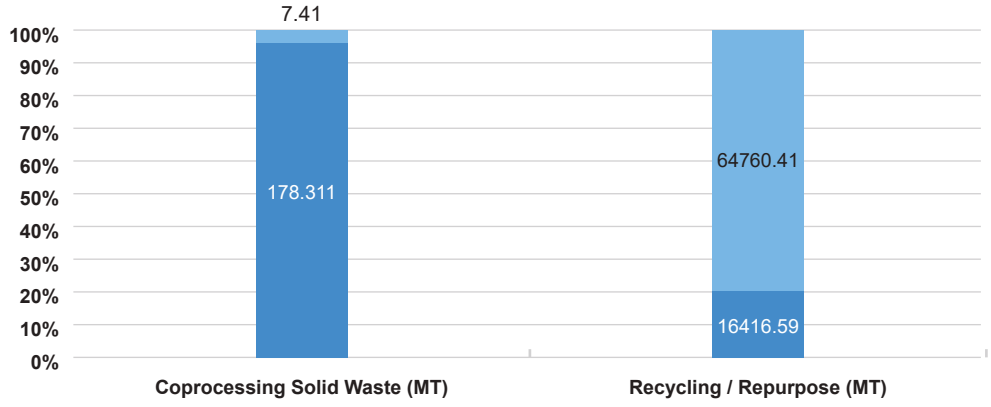


The data reflects a positive trend in hazardous waste management, with a substantial reduction in FY 2023-24, indicating improved waste management practices.

WASTE DIVERTED FROM DISPOSAL

BI generated 81,362 tons of waste. Brake Division accounts for 20% of the total non-hazardous waste. Foundry Division accounts for 80% of the total hazardous waste.

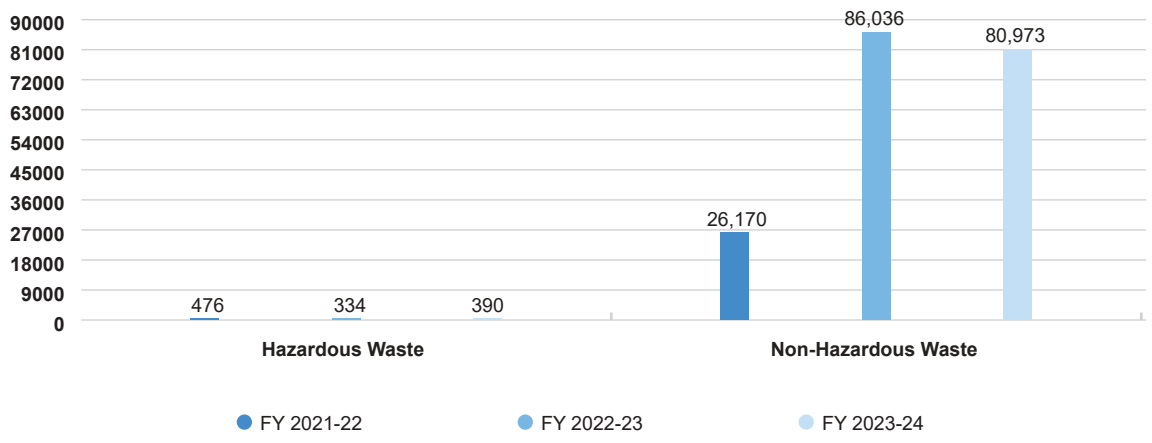
WASTE DIVERTED FROM DISPOSAL FY 2023-24



	Coprocessing Solid Waste (MT)	Recycling / Repurpose (MT)
Brake Division	178.311	16416.59
Foundry Division	7.41	64,760.41

Method of Disposal	UoM	Brake Division		Foundry Division		Total	
		Non-Hazardous Waste	Hazardous Waste	Non-Hazardous Waste	Hazardous Waste	Non-Hazardous Waste	Hazardous Waste
Coprocessing Solid waste	Metric Tons	0	178.311	0	7.41	0	185.72
Recycling / Repurpose		16,236.64	179.95	64,736.11	24.30	80972.74	204.25
Total		16,236.64	358.26	64,736.11	31.71	80972.74	389.97
Grand Total		16,594.90		64,767.82		81,362.71	

TREND OF WASTE DIVERTED FROM DISPOSAL IN MT



The data shows progress in waste diversion from disposal, with a notable increase in non-hazardous waste diversion in FY 2023-24, indicating a strong push towards recycling and reuse.

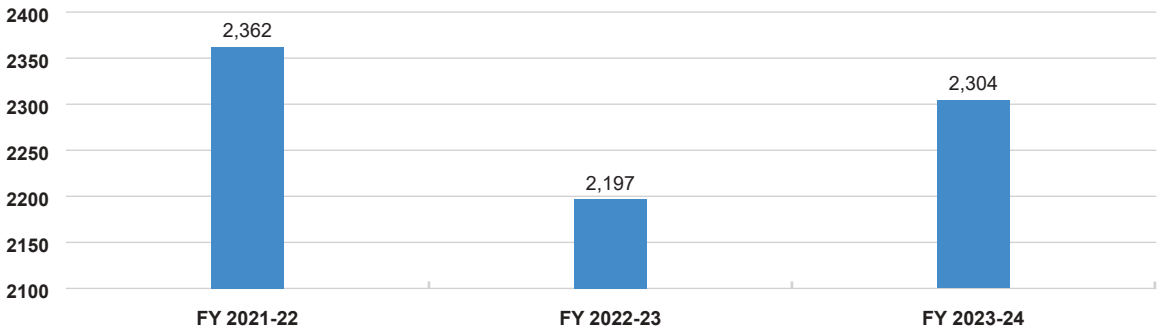
- **Brake Division – Nanjangud:** All the bio-degradable waste has been converted to Vermicompost. The plant generates 2.5 Metric Tons of Vermicompost per month. It is used for gardening purposes.
- **Foundry Division – Sholinghur:** Non-hazardous waste including return sand, Slag, and fine dust are used for construction purposes. The New Admin building at Sholinghur has been built by utilizing the waste.

WASTE DIRECTED TO DISPOSAL

Wastes that could not be reused or recycled (ETP sludge, Phosphate sludge & Paint waste) were disposed through business partners authorized by SPCB.

Method of Disposal	UoM	Brake Division		Foundry Division		Total	
		Non-Hazardous Waste	Hazardous Waste	Non-Hazardous Waste	Hazardous Waste	Non-Hazardous Waste	Hazardous Waste
Landfilling	**Metric Tons**	0	2,304	0	0	0	2,304

TREND OF WASTE DIRECTED TO DISPOSAL IN MT:



CIRCULAR ECONOMY INSIDE BIPL

We have a 'Circular Economy' strategy in place where the punched scrap generated during the punching process from the Brake division is sent to the Foundry Division where it is melted and reused. This reduces the consumption of virgin materials in the foundry division.

The Foundry Division uses the following percentage of recycled input materials.

- 97.16 % of Recycled Sand
- 91.75 % of Recycled Materials (including used moulds and other metal waste)

We continue to concentrate on creating effective strategies for lowering our waste creation and encourage recycling and reuse across all our business operations with the long-term objective of minimizing our environmental footprint. We have a circular economy and resource efficiency as our strategic focus to achieve our goals of 'Waste to Wealth' and 'Zero Waste to Landfill'.

CARE FOR PEOPLE

MATERIAL TOPICS COVERED

Occupational Health and Safety
Training and Education
Corporate Social Responsibility

Brakes India, like every other organisation, has witnessed unprecedented challenges during and after the COVID 19 pandemic. This has brought about a significant change in both the personal and professional lives of employees, who are our strongest assets. However, amongst all the disruption, Brakes India has consistently supported all the employees through the implementation of health and wellness campaigns.

We also continue to engage with employees by investing in their professional growth and providing a workplace that is conducive to performing at their best. We have designed and implemented new policies and procedures to keep up with the changing world. These methods have seen fruition with the help of reward programs to encourage employees for their innovation and out-of-the-box thinking.

Overall, Brakes India's commitment to care for its people is central to its business strategy, and we ensure that the employees are not only given the necessary support but are also empowered to succeed in their respective roles and play a significant role in the overall success of the organisation.

OCCUPATIONAL HEALTH AND SAFETY

Prioritizing health and safety and ensuring the wellbeing of all employees is essential to the growth and success of our organization. All activities, processes, workplaces, and workers including contract employees are covered by the occupational health and safety management system and policy. All our sixteen manufacturing facilities are ISO 45001:2018 certified. Being a people-centric organization, we have implemented several initiatives to promote occupational health and safety (OHS) through training and development programs, employee engagement initiatives, and policies and practices. All our working group (blue collar workers) people's safety, wage settlement, welfare for workers is decided on mutual agreement with the senior management and employee union.

Brakes India considers employee health and safety as a core material issue with a belief that an employee can be productive only when they are assured of their safety. We are committed towards ensuring employee safety, incorporating the highest safety standards and hospitable working conditions. We have cultivated a cultural belief that safety is everyone's responsibility and encourage employees to speak up and take up ownership with respect to every dimension of safety.

SAFETY IS EVERYONE'S RESPONSIBILITY

We ensure safe working conditions by incorporating the highest of safety standards with technological advancements. We believe that sharing best practices and invoking a personal commitment in each team member enhances our ability towards achieving our goal of zero-injury or zero-accident. Additionally, to avoid unsafe incidents, we also adopted key safety tools and practices, including risk assessment in all machines and equipment, poka-yoke concepts, safety training for all employees, etc.

OCCUPATIONAL HEALTH AND SAFETY NEWSLETTER

As an initiative towards creating awareness on HSE to employees, Corporate HSE Newsletter is published once in every 6 months and circulated to employees, also uploaded in Employee Portal. This newsletter is released in English for the supervising staff and in Tamil for the working group (blue collar workers)

We also identify and assess risks through our internal occupational health and safety audit procedure pertaining to work related hazards for routine and non-routine activities as per the ISO 45001:2018 Standards and applied hierarchy of controls to eliminate hazards and minimize risks and reviewed periodically and as and when required. The results of these processes are reviewed through Internal audits, Management Reviews Meeting (occurs once in every meeting) and Health, Safety and Environment Committee meetings (occurs once in every three months).

INCULCATING A SPEAK-UP CULTURE

Employees are also encouraged to report work related hazards in various forums like Health, Safety and Environment Committee meetings, Daily work management meetings, Near-miss and unsafe conditions reporting system, etc. and corrective actions are initiated and communicated to workers. We have a complaint register mechanism in place for employees to report any instance of issues related to safety. The confidentiality of the reporting personnel is maintained and protected against reprisals through the Employees' Trade Union.

We have a safety committee at each of our manufacturing plants that includes representation from both management and worker representatives. Safety Month is celebrated in March every year, filled with training and awareness campaigns and competitions to encourage employee participation.

OCCUPATIONAL HEALTH SERVICES

Our care towards employee wellbeing is supported by an occupational health center equipped with cutting edge technologies and qualifies doctors and staff to take care of employee health and offer any immediate medical assistance if required. Periodical audits are conducted at occupational health centers to ensure quality health services to our employees. Confidentiality of workers' personal health-related information is maintained by the occupational health center and Human Resources Department.

OCCUPATIONAL HEALTH AND SAFETY TRAINING

We continue to enhance our employees' knowledge and awareness on occupational Health and safety through various training programs. In the current reporting period, we have conducted various training program covering both our employees and contact workers as follows.

Category	Total number of trainings provided	Number of trainings provided on health and safety measures
Employees		
Male	3,603	1,113
Female	75	22
Total	**3,678**	**1,135**
Contract Workers		
Male	14,108	4,210
Female	305	99
Total	**14,413**	**4,309**

Brakes India has taken several initiatives towards providing benefits to its employees such as coverage under ESI scheme (for employees below INR 21,000/Month salary), Personal Accident and Health Insurance Coverage for employees, and Personal Accident Coverage for Apprentice. Other programs are conducted by the Field Medical Officer on monthly basis, on wide range of health-related topics - Understanding Diabetes, Hypertension, Fat and Fatality, Importance of mind health, Heart attacks and Strokes, Good Food Habits, Asthma & Allergy, etc.

For mental well-being, we organize yoga sessions on regular intervals, and conduct training sessions on online platforms for handling work stress. To promote mental wellbeing at the workplace, personal counselling also given to employees with the help of company doctors.

We accord top priority to Occupational Health and Safety and have zero tolerance towards any incidences related to it. Our goal is to build an accident-free organization, so that our employees can work comfortably in a safe and healthy environment. Efforts are also made to enhance the social well-being of our employees - guiding our employees to improve their financial status through sessions conducted by external financial advisors. We also organize social along with the families of our employees on special occasions. We strengthen our culture by the way of deploying safe work systems, providing displays and signages in workplaces, conducting behavior safety studies, capturing near misses and unsafe conditions.

TRAINING AND EDUCATION

A skilled workforce is a crucial strategic success factor for Brakes India. We are motivated to learn and develop our professional and leadership skills by the cultural pillars that are driven by our top management. We are dedicated to investing in the growth of our employees because we understand how important they are to our long-term success and expansion. To create a new future of transformation, we want to develop a workforce that is both highly talented, motivated, competitive, and productive by giving employee training and skill development a top priority. Our 'Training' and 'Skill Development' center at major sites are constantly enhancing our workforce to close the skill and knowledge gap that results from the ongoing changes in the dynamic business world.

The training and skill development requirement is identified by doing 'Competency Mapping' for 'Management People' (Senior, Middle and junior management) and by developing a 'Skill Matrix' for 'Working Group' (Blue Collar Workers). Based on the training requirement, our 'Human Resource (HR)' department and 'Personal' department releases yearly 'Training Calendar' and 'Training Curriculum' with modules on following eight thematic areas.

- Awareness Training
- Technical Training
- Customized Training
- Internal Auditor Training
- Behavioral Training
- Wellbeing
- Women Development Programs
- Mandatory Programs

The yearly 'Training Calendar' and 'Training Curriculum' provides solutions that make use of various learning media, platforms and pertinent material that is in line with current business trends. This entails enhancing future-relevant competencies and giving people the tools, they need to learn more quickly and flexibly. As a result, the company's workforce is more employable, and its competitive position is maintained.

In the current financial year, to enhance our workforce skill we have invested INR 6 million for conducting various internal and external training programs. In FY 2023-24, we have spent 3.62 manhours of training per employee in different management and working group as follows

Category	UoM	Brake Division		Foundry Division		Total	
		Male	Female	Male	Female	Male	Female
Senior Management	Number	15	2	4	2	19	4
	Manhours	195	16	32	16	227	32
Middle Management	Number	630	19	230	4	860	23
	Manhours	7320	274	520	32	7840	306
Junior Management	Number	910	54	732	3	1642	57
	Manhours	8040	486	1610	2	9650	488
Working Group (Blue Collar)	Number	12510	252	378	5	12888	257
	Manhours	35071	474	1319	2.5	36390	476.5
Total	Number	14065	327	1340	8	15405	335
	Manhours	50626	1250	3449	4.5	54075	1254.5
Average Hours of Training	Manhours/ Employee	3.7		1.57		3.62	

After every training program, feedback is collected from all the employees to improve the quality of the training program.

PROGRAMS FOR UPGRADING SKILLS AND TRANSITION ASSISTANCE PROGRAM

We at Brakes India seek every opportunity to develop our employee skills. We provide sabbatical leaves to employees and funding for external training on need basis. We care about our employees after retirement and provide support to their transition to non-working life by providing financial guidance and counselling for intended retirees. Retraining and job placement services are provided to employees who are willing to work again after their retirement/termination.

In FY 2023-24 Brakes India has undertaken the following initiatives/programs to enhance employee engagement, training, and development.

KNOWLEDGE SHARING SESSION

At brakes India, we always provide the opportunity for our employees to enhance their knowledge. 'Knowledge Sharing Sessions' are conducted once every month by internal/external staffs to all the Supervising staffs (including Senior, Middle and junior Management People). The session covers various topics such as Occupational Health and Safety, Finance, Environment etc.

RECREATION CLUB

Employee mental and physical well-being is our top priority. To support our priority, we have recreational facilities at our major sites that include indoor games such as Carrom Board, Table Tennis, and Chess and outdoor games such as Football, Volleyball, and Cricket. Our employees are refreshing themselves during free hours. Internal competitions are conducted periodically, and winners are felicitated.

ANNUAL GET TOGETHER

We rejuvenate our employees' physical and mental well-being by 'Annual Get Together Tours' to all our supervising staff. During these tours, our employees enjoy sightseeing and games are conducted to increase their participation and engagement.

CAREER GUIDANCE PROGRAM

We care for our people's professional and personal development even after they leave Brakes India. These programs are conducted in our Padi Plant, Brake Division to all Diploma Trainees who have completed their second- or third-year training and leaving brakes India. Three days training program are conducted to enhance their career and personal development.

COMPETITIONS

Internal competitions are conducted periodically to increase employee engagement, skills, and knowledge. The internal competitions are conducted on various thematic areas but not limited to the following.

- Jun – Environment month (5th Jun of every year is celebrated as 'World Environment Day')
- March - Safety Month (4th March of every year is celebrated as 'National Safety Day')
- November month is celebrated as 'Quality Month.'

During these months, competitions (slogan, essay writing, quiz, elocution, drawing, poem writing, etc.), training programs and knowledge sharing sessions are conducted by internal and external staff. Pledges are taken by the employees to emphasize the importance of themes. Employees as well their family members participate in the event. The winners of the competitions are felicitated in the valedictory functions with rewards and awards. Other than the internal competitions, our employees are encouraged to participate in external competitions as well.

PERFORMANCE AND CAREER DEVELOPMENT REVIEWS

At Brakes India, we foster a vibrant and encouraging workplace environment that encourages honest communication and inspires each person to realize their full potential. We have an internal mechanism called 'Personal Development Appraisal' (PDA) in which the 'Supervising' employees set diverse professional goals that are aligned with our organization goals. These goals are set during the start of every financial year, and it is reviewed in the financial year end. The employees are appraised based on their performance and review given to improve their performance. This system aids in the development of a high-performance workplace where all the employees can succeed.

In the current financial year, all the supervising staff have received regular performance and career development reviews. All the working group employees (blue collar workers) receive regular performance and career development reviews through 'Settlement' mechanism which is handled by our 'Personal' department.

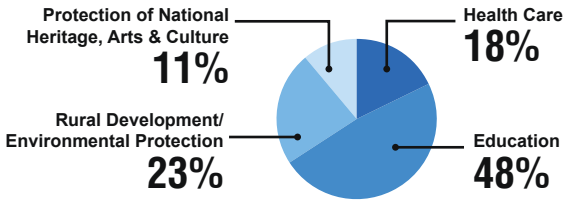
Future success for Brakes India will depend on how quickly and thoroughly it learns, and our 'Training' and 'Skill Development' center is the cornerstone of that preparation for its employees. We believe in pushing our employees to improve professionally and supporting them with a wide variety of learning opportunities and work-related experiences. By offering chances for professional and personal growth, we uphold our duty towards our employees to enable and support their ongoing growth, networking, teamwork, and strategy, primarily for future fit and creating a competitive edge. BIPL is committed to sustainable development and our endeavor is to grow together by enriching our employees' professional, personal and leadership skills.

CORPORATE SOCIAL RESPONSIBILITY

As a responsible business, we at Brakes India are always committed to serve the community. Giving back to the community always lies in our core business values and our action reflects that. We have a separate CSR Committee in place to take care of our CSR activities. Our CSR Committee meets regularly to discuss the needs of the project, its progress and implementation. Through our CSR activities, we hope to create a positive impact on the world and people lives. Social Impact Assessment study is carried out to understand the impact of the project.

In the current financial year, we have spent INR 7.72 crores and impacted many people life through various CSR activities as follows.

CSR EXPENDITURE (INR CRORES) FY 2023-24



S. No	CSR Initiatives	Expenditure (INR Crores)
1	Health Care	1.37
2	Education	3.74
3	Rural Development/Environmental Protection	1.80
4	Protection of National Heritage, Arts & Culture	0.81
Total		**7.72**

1. HEALTH CARE

Category	INR in Crores	BIPL Contribution
Sholinghur Development Trust	0.50	Promoting health care including preventive health care by way of purchase of Hospital equipments
Thirumalai Charity Trust	0.40	
Sundaram Medical Foundation	0.24	
RAHAT Charitable and Medical Research Trust	0.20	
Tiara Haemophilia & Cancer Foundation	0.03	
Total	**1.37**	

BLOOD DONATION AT BRAKES INDIA PADI

Approximately 154 Employees, Trainees and Contract helpers have donated blood during the year April 2023 - March 2024. Brakes India Private Limited in collaboration with the VHS Blood Centre (A Unit of Voluntary Health Services, Madras) had organized a Blood Donation Camp on 05.05.2023 (Friday) and 25.05.2023 (Thursday) & **319 Units** were collected

BLOOD DONATION AT BRAKES INDIA POLAMBAKKAM PMBAKKAM

Names of the NGOs involved

- Chengalpet Government Medical College Hospital (CGMCH) Blood Bank, Chengalpet.
- Rotary Cenral TTK – VHS Blood Centre.

Dates of the drives – 01/05/2023 and 02/06/2023

02
Number of blood donation camps

150
Number of donors

150
Units of blood donated

2. EDUCATION

Institution/Project	INR in Crores	BIPL Contribution
Sastra University	0.75	Promoting education by way of contributions to institutions for buildings/ capital equipments/ research projects, skill development, Training and providing financial assistance to poor and deserving students/Rural education & differently abled students
Matrix Craft & Technical Trust	0.35	
Laxmi Charities	0.75	
Sholinghur Development Trust	1.05	
All India Movement for Seva	0.14	
Madras Dyslexia Association (MDA)	0.20	
Sri Ranganathan Paduka Vidyalaya	0.25	
Bhagini Seva Samaja	0.25	
Total	**3.74**	

3. RURAL DEVELOPMENT/ENVIRONMENT PROTECTION

Institution/Project	INR in Crores	BIPL Contribution
Ashoka Trust for Research in Ecology and Environment	0.50	Rural development & Environment Protection
Gandhigram Trust	0.25	
Environmentalist Foundation of India	0.56	
Covelong Arun Vasu Foundation	0.10	
Swami Vivekananda Rural Development Society	0.25	
Vishranthi Charitable Trust	0.05	
Various	0.09	
Total	**1.80**	

4. PROTECTION OF NATIONAL HERITAGE, ARTS AND CULTURE

Institution/Project	INR in crores	BIPL Contribution
Kuppuswami Sastri Research Centre	0.25	Protection of national heritage, art and culture.
Sri Vedanta Desikar Devasthanam	0.25	
Sundaram Charities	0.10	
Kalavaahini Trust	0.07	
Sri Krupa Trust	0.06	
Arulmigu Srimandaveli Amman NatagaMandram	0.08	
Total	**0.81**	

BIPL CARE TOWARDS ANIMALS – 'GOSHALA'

LOCATION: SHOLINGHUR, BRAKE DIVISION

Animals play a vital role in our ecosystem, and we at BIPL are committed to maintain the ecological balance. In our Sholinghur plant, Brake Division, we have a separate area for cattle called 'Goshala'. Established in 1989, our 'Goshala' currently has a total strength of seventy-nine cattle, including fifty-six cows, fourteen cow calves, and nine bull calves. We have deployed two persons with prior experience to take care of all the cattle.

The milking is done using an automatic machine, and the yield is approximately sixty litres per day, which is used in the canteen. The cow dung generated from the goshala is used as manure to cultivate fodder for the cattle and is also given to other Sholinghur units to be used as manure for gardening.

We recognize our responsibilities to the community as a responsible corporate citizen of this country, and this understanding drives us to make contributions to the betterment of society as a crucial facet of doing business.

WATER MANAGEMENT

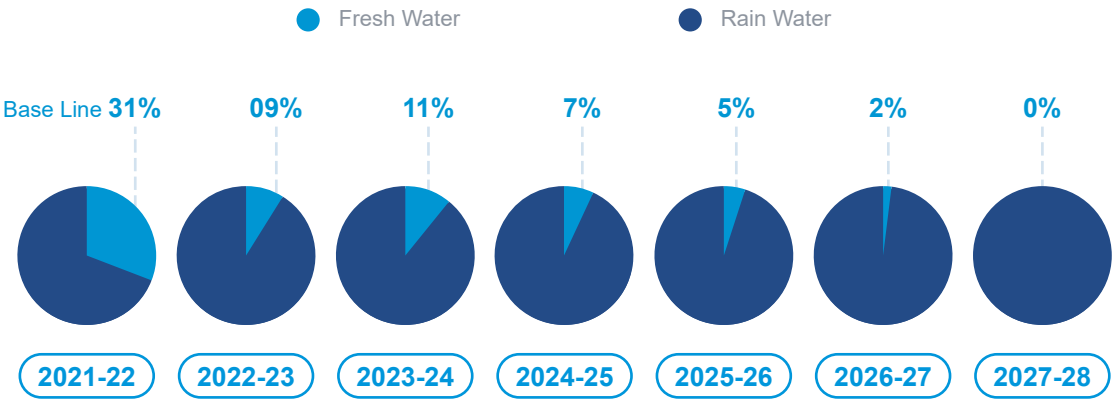
Roadmap to achieve 100% water consumption by using rainwater

Our Foundry Division has set a target of achieving 100% of its water consumption by using rainwater by 2028. This will be achieved by reducing its net freshwater consumption by 3% year-on-year for the next 4 years

Rain water Utilization- 147 Megaliters/ Annum For the period (April 23 to March 24)

Rainwater utilization @ BI Foundry units - Sholinghur through enhancing RWHP capacity

Total RWHP- 8 Nos
Total RWH Capacity- 62 Mega liters 2023-2024 89% of share used from rain harvesting water of total water consumption

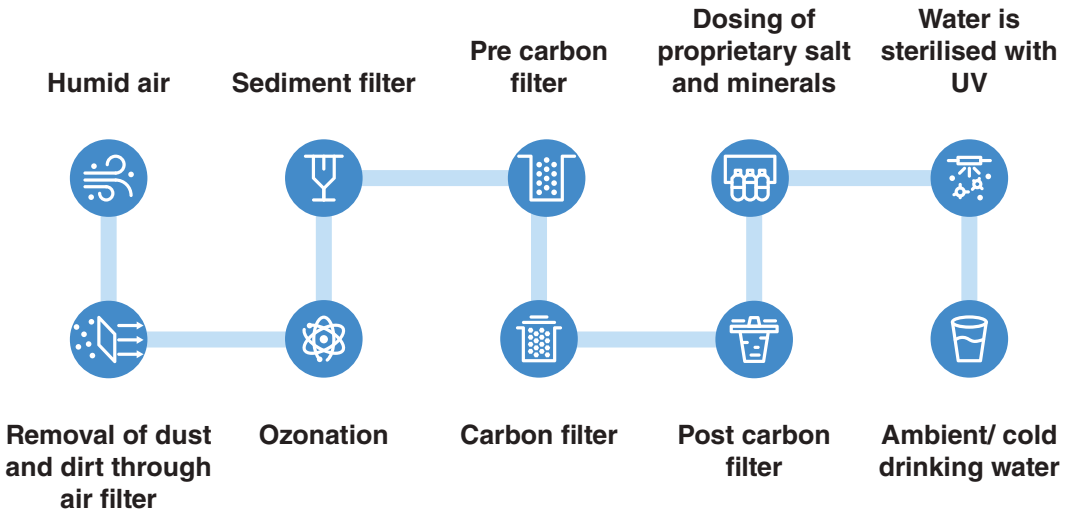


WATER CONSERVATION

DRINKING WATER EXTRACTION FROM ATMOSPHERIC AIR

Without water input, the process and rejection of wastewater can extract drinking water from the earth's atmosphere. This is an exciting new technology. We have a 60-litre per day capacity.

- No ground water dependence
- No plumbing / pipe
- No Wastage of water
- No direct carbon and plastic footprint



STATE OF ART FILTRATION PROCESS

Multi stage filtration and disinfection system developed through strategic partnership with CSIR-IICT (Indian Institute of Chemical Technology) which ensures supreme quality of potable water which meets if not exceeds Indian as well as WHO (World Health Organisation) potable water standards.

TRANSITION FROM MANUAL TO AUTOMATIC SOFTENER

Replacing conventional softener plants with automatic generation softeners to reduce spent resin and salt – 500 KL/Annum

Automatic Softener System design details				
Comparison between Conventional - Softening plant Vs Auto - Softening plant				
Sl.No.	**Description**	**Conventional Softening plant (Present)**	**Auto - Softening plant**	**Advantages**
1	Type of Resin	Regular grade with 0.2 - 1.2 mm	Special grade of Mono sphere resin - 1.25 mm	Get more product water (10 - 15% more) / Less breakage of resin
2	Total Quantity of Resin	1000 L	750 L	250 L Resin is less than Conventional
3	Regeneration waste water volume in Ltrs / Regeneration	10000 Ltrs	7000 Ltrs	3000 Ltrs water saving
4	Salt Required / Regeneration	200 Kgs	135 Kgs	65 Kgs salt saving
5	Output of water in Ltrs / Regeneration	120000 Ltrs	160000 Ltrs	Output water 40000 Ltrs more
6	Average resin replacement / Year	250 Ltrs / Year	150 Ltrs / Year	Can reduce quantity of Resin 100 Ltrs / Year

ROOF RAIN WATER COLLECTION FROM WTP BUILDING

Collecting rainwater from roofs is a practical and sustainable way to gather water for various uses, including irrigation, non-potable uses, and sometimes even potable uses with proper treatment. Here's a comprehensive guide on how to effectively collect rainwater from roofs :

A 15m × **B** 9m × **C** 177m

Last year rain fall
177 mm

WTP area of catchment
135 Sq.M

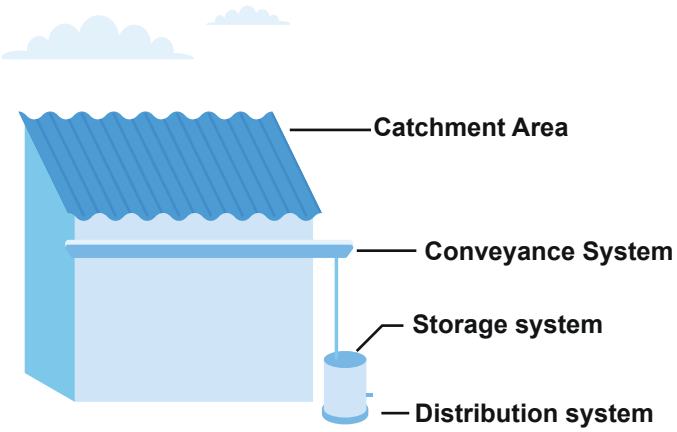
Runoff coefficient
0.9

Water harvesting potential
177 * 135 * 0.9

Last year Water volume
38030 Litres

Water in litres / year	21506.00
Cost saving / year	2688.00
Material cost	Rs. 6000
Pay Back	2.23 Years

Water Quantity: 60 litres/minute
Water Quality: TDS- 12 ppm
pH: 7.6 & Cond- 18 µs



To collect rainwater in the WTP ground water tank from the WTP and office building roofs when it rains

WATER CONSERVATION

DEMINERALIZED WATER PLANT: DM Plant at Unit 1

Location: WTP

HCL Cation Bed Anion Bed Caustic

DM Water Monthly requirement - 2KL

Existing operation

Resin - Cation-200 Kgs / Anion-200 kgs = Total-400 Kgs

Back Wash and Regeneration process:

1. 8 KL one time Back Wash water and Regeneration process
2. Caustic soda-20 kg & HCL acid – 25 Litters
3. Trade effluent :- 4 KL Backwash (Regeneration)
4. Capacity :- 1000 Ltrs /hr (8000 L / Regeneration)
5. Time required for regeneration – 2 Hrs
6. Input water:-Soft water (TDS 1200 TO 1500 ppm)

Benefits of New MBSR system

Resin – Mixed Bed Softener Resin (MBSR) – **32 kg**

Backwash and Regeneration process:

1. yearly once Resin to be changed (32 kg only)
2. Chemicals eliminated
3. Backwash eliminated
4. Capacity :- 250 ltrs / hr.
5. Regeneration process eliminated
6. **Input water** :- RO or AC condensate Water **(TDS<100ppm)**

Benefits : -

- 370 KG resin consumption reduce / Annum
- Chemical usage eliminated Caustic soda & HCL acid
- Back wash and Regenerating process was eliminated
- To eliminate wastewater generation from demineralized water plant

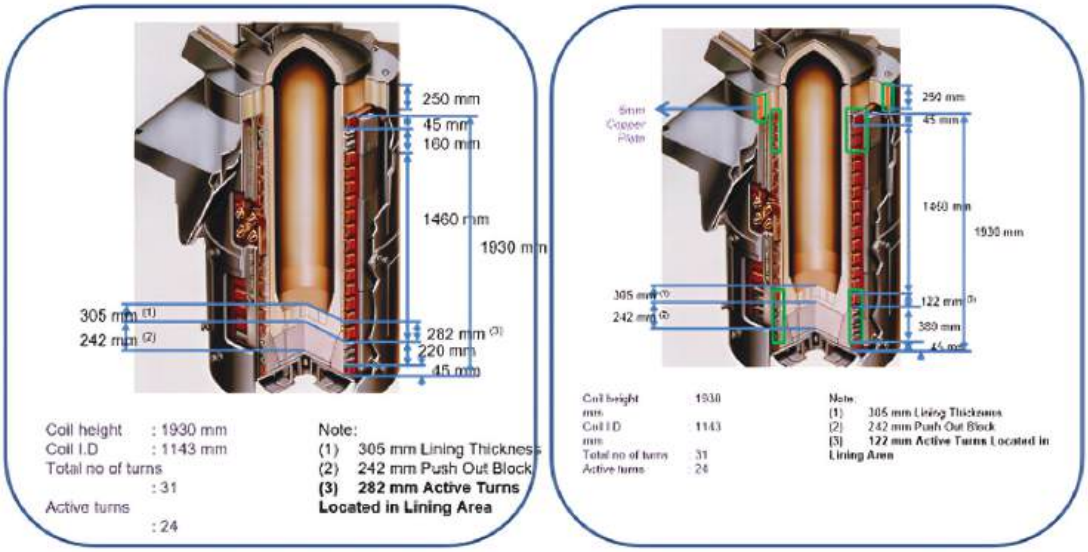
Foundry Division				
Sl.No.	**Initiatives**	**Water saved (M3 /Year)**	**Amount invested in Lakhs**	**Cost Saved in Lakhs / Year**
1	Drinking water extraction from atmospheric air	18.0	1.85	3.6
2	Transition from manual to automatic softener	108	3.60	2.5
3	Roof rainwater collection from wtp building	21.5	0.06	0.027

ELECTRICAL ENERGY MANAGEMENT

Melting coil design modification

In our SF4 line. The induction -type furnaces operate to melt the molten metal. This has resulted in higher power consumption, leading to higher operational costs and emissions.

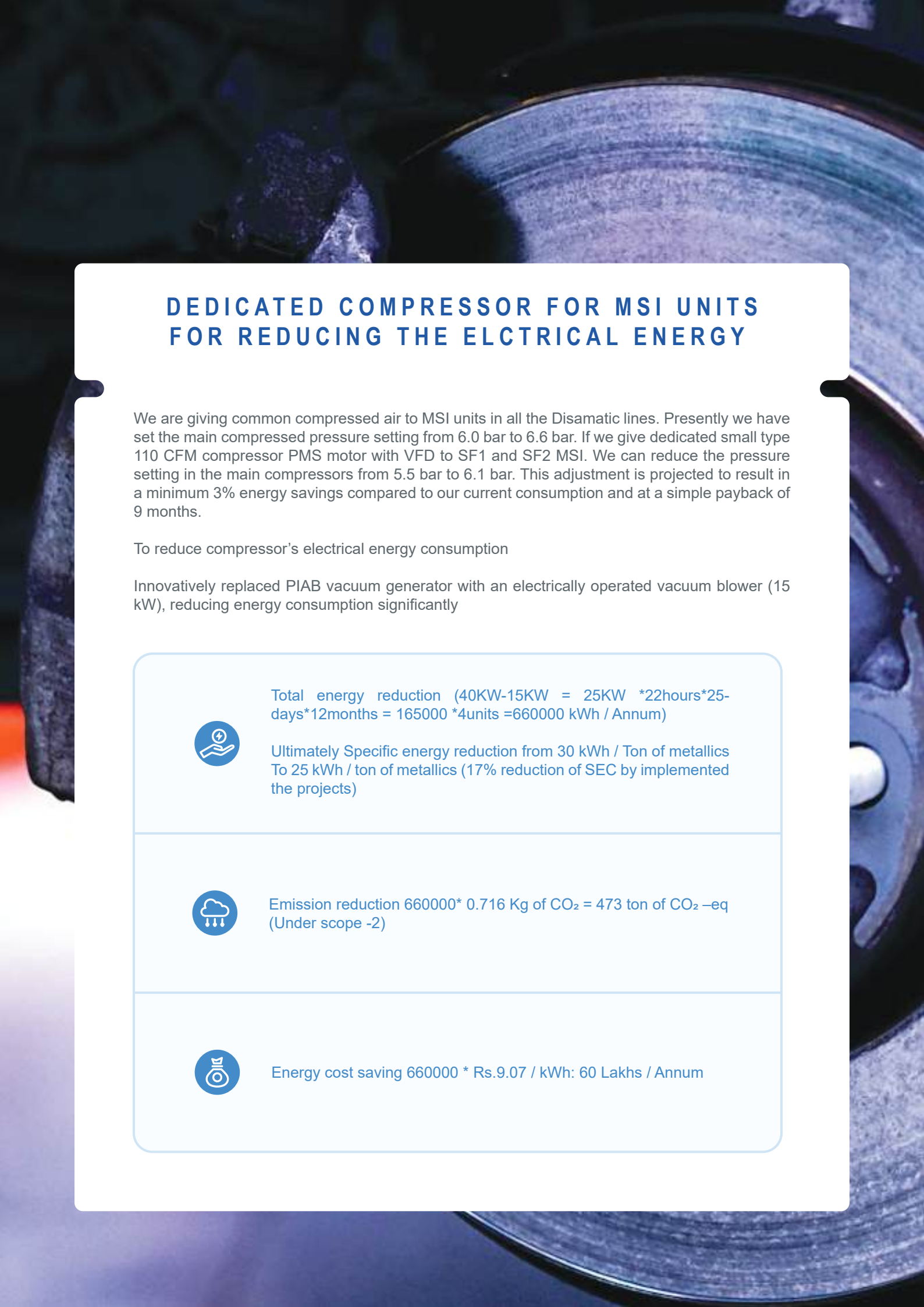
In order to reduce our operational costs and emissions, we have modified the design the existing melting furnace with a 6-ton capacity coil that is operable with a medium supply frequency of 50 Hz. This new design modified furnace coil has proven to be advantageous. This has resulted in an annual energy savings of 1.20 lakh kWh per year, which has translated into a cost savings of INR 10.9 Lakhs. This energy reduction is equivalent to an emission reduction of 85.90 tons of CO2 equivalent per year



Energy saving
120000 KWh / annum

Cost saving 10.88
Lacs / annum

CO_2 Emission Reduction
85.920 Ton / annum



DEDICATED COMPRESSOR FOR MSI UNITS FOR REDUCING THE ELCTRICAL ENERGY

We are giving common compressed air to MSI units in all the Disamatic lines. Presently we have set the main compressed pressure setting from 6.0 bar to 6.6 bar. If we give dedicated small type 110 CFM compressor PMS motor with VFD to SF1 and SF2 MSI. We can reduce the pressure setting in the main compressors from 5.5 bar to 6.1 bar. This adjustment is projected to result in a minimum 3% energy savings compared to our current consumption and at a simple payback of 9 months.

To reduce compressor's electrical energy consumption

Innovatively replaced PIAB vacuum generator with an electrically operated vacuum blower (15 kW), reducing energy consumption significantly

Total energy reduction (40KW-15KW = 25KW *22hours*25-days*12months = 165000 *4units =660000 kWh / Annum)

Ultimately Specific energy reduction from 30 kWh / Ton of metallics To 25 kWh / ton of metallics (17% reduction of SEC by implemented the projects)

Emission reduction 660000* 0.716 Kg of CO_2 = 473 ton of CO_2 –eq (Under scope -2)

Energy cost saving 660000 * Rs.9.07 / kWh: 60 Lakhs / Annum

REDUCTION OF FOSSIL FUEL BY INTRODUCING ELECTRICAL ENERGY RESISTANCE

Our Foundry Division is a pioneer in manufacturing and supplying ferrous casting. Our casting includes various processes in which the 'Ladle' is used to transfer molten metal from one process to another. At BI foundry unit- 1(D line), we have a two-ton capacity ladle. Before pouring on the molten metal into the ladle, it needs to be preheated to negate the moisture content. For the preheating process, Superior Kerosene Oil (SKO) is used to maintain a temperature of 900°C – 1000°C. Now we have introduced an 'Electrical Resistance' preheating methodology in the ladle through which we were able to avoid the usage of SKO. In FY 2023-24, by eliminating SKO in the preheating process, we reduced **198** Tons of CO2 Equivalent Scope 1 emission and saved **INR 4.13** million.

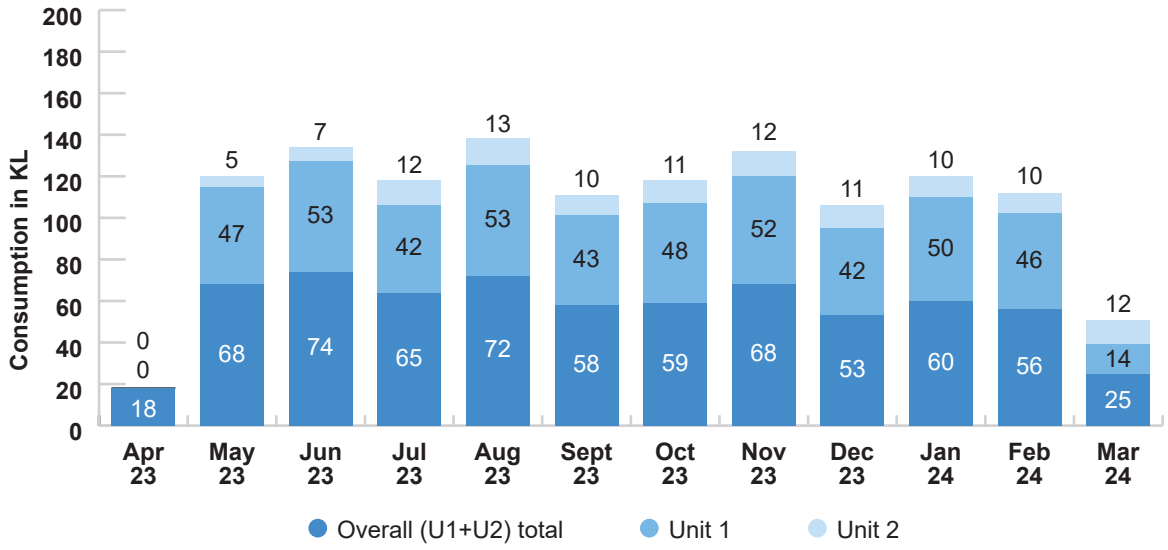
Benefits

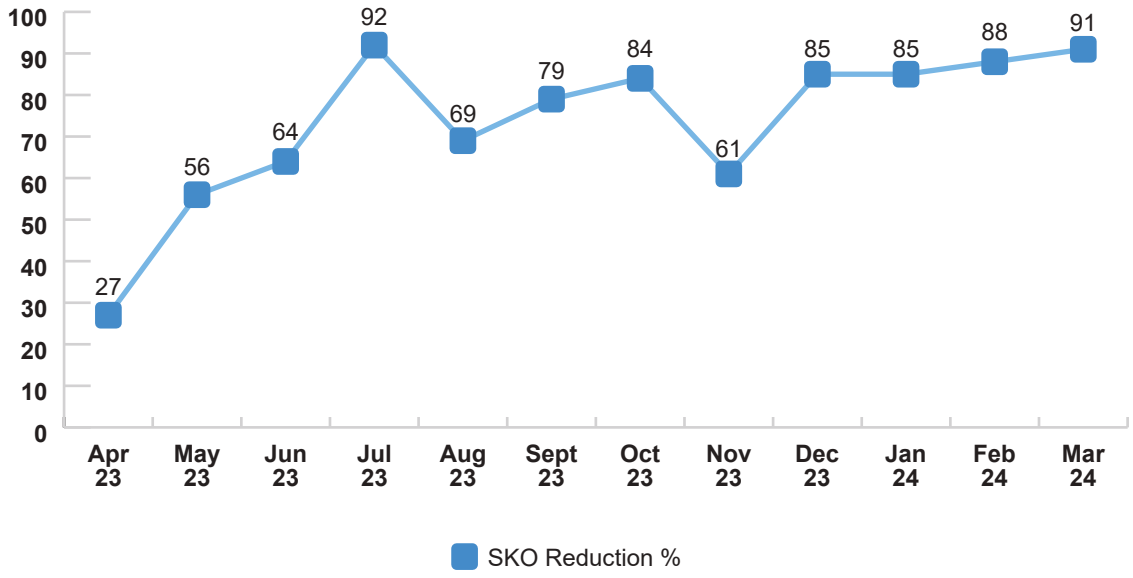
- No CO2 emission due to fossil fuel consumption
- We can reduce the energy consumption for blower & SKO pump around: 9800 units / annum
- No sound
- Fossil fuel usage avoided

UTILIZATION OF MINERAL HYDROCARBON OIL

Brakes India Foundry switching from using SKO (Superior Kerosene Oil) to mineral hydrocarbon oil for heating applications like ladle, unheated tundish and furnace preheating and also annealing process., towards reduction of fossil fuel consumption, this fossil fuel reduction is significantly contributing the CO_2 emission reduction in under scope 1 and Scope 3 – Category 3.

This has resulted in an annual fossil fuel reduction of **676 KL** utilized for the year 2023-24, which has translated into a cost savings of **INR 7.44 million**. This fossil fuel reduction is equivalent to an emission reduction of **1703.52 tons of CO_2** equivalent per year.





BENEFITS

- No CO_2 emission.
- Fossil fuel usage avoided

RENEWABLE ENERGY UTILIZATION

Sustainable Energy: Considered avenues that prioritize renewable energy sources or have energy-efficient practices, reducing the overall environmental impact of the casting process - Manufacturing of Casting with Renewable Energy Substitution in Place of Grid Electricity (Fossil Fuel) and Avoiding fossil fuels through alternate fuels like thermal energy.

Our Foundry division has set a target to consume 80% of the total energy consumption through renewable energy by FY 27. The targeted year-on-year improvement and associated emission reduction are as follows.

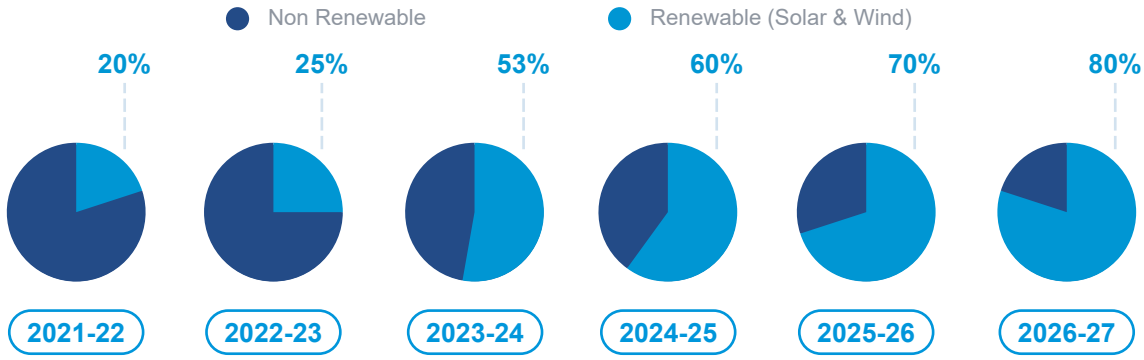
For the year 2023-24 we haveachievedthe renewable energy (Solar, Wind and Bagasse) up to 53%. We plan to increase the renewable energy 10% for next three years.

RENEWABLE ENERGY - CO_2 EMISSION REDUCTION

Green power utilization plan for Foundry

Under Scope II- One unit (KWh) offset with renewable energy 0.711 kg of CO_2 emission get reduced

Under Scope III- One unit (KWh) offset with renewable energy 0.133 kg of CO_2 emission get reduced



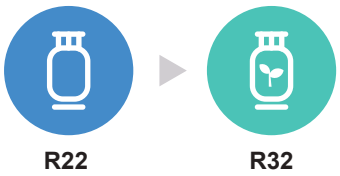
ELECTRICAL ENERGY MANAGEMENT

As per EPA (Environmental Protection Agency), the timeline for phase out of R22/R12 (HCFC gas) is by Jan 1, 2020, we have been replacing R22 refrigerant to R410A / R32 refrigerant Air conditioners from the year 2016 onwards in a phased manner.

To reduce the electrical energy consumption by replacing 5 numbers inverter air conditioners at Unit 2 in various places One inverter A/C energy saving 0.86 units / hour (20*0.86 =17.2 units/day).5*17.2=86 units / Day saving.

AIR CONDITIONING SYSTEM MIGRATION TO R32 AC UNITS

Air Conditioning system Migration to R32 AC Units



Comparison between R22 Vs R407c, R410a & R32				
	R22	**R407c**	**R410a**	**R32**
Ozone depletion potential	0.055	0	0	0
Global warming potential (GWP)	1600	1600	1725	675
Toxicity	High	Very low	Very low	Very low

Excellence in energy efficiency 6 AC units converted in phase 6 (2023)

Phase 1 (2016)	Phase 2 (2017)	Phase 3 (2018)	Phase 4 (2020)
14	24	24	19
Phase 5 (2022)	**Phase 6 (2023)**	**Phase 7 (2024)**	**Phase 8 proposed (2025)**
10	06	06	07

Total
110

Features

- Human presence sensor
- Pursuit of high energy efficiency
- IOT- Operation through mobile app
- Reduction: 23.86 Tons/ year
- Energy Saving: 112 KWh/ day
- Cost Saving: 2.68 lakhs per year

ENERGY EFFICIENCY

Foundry Division				
Sl.No.	**Initiatives**	**Energy saved in kWh**	**Amount invested in Lakhs**	**Cost Saved in Lakhs / Year**
1	Melting coil design modification	120000	2.1	10.88
2	Dedicated compressor for MSI units for reducing the electrical energy	60840	9.0	4.87
3	Innovatively replaced PIAB vacuum generator with an electrically operated vacuum blower	660000	8.00	60.0

EMISSION REDUCTION

Foundry Division		
Sl.No.	**Initiatives**	**Emission reduction in Ton of CO_2**
1	Utilization of Mineral Hydro carbon oil	1703.52
2	Renewable energy utilization	61345 (RE 53 % of total energy consumption)
3	Air Conditioning system Migration to R32 AC Units	18.472
4	Reduction of fossil fuel by introducing electrical energy resistance	198

NAIDUPETA

The table below illustrates how the increased capacity for rainwater harvesting significantly enhanced rainwater utilization, while third-party water procurement also saw a reduction.

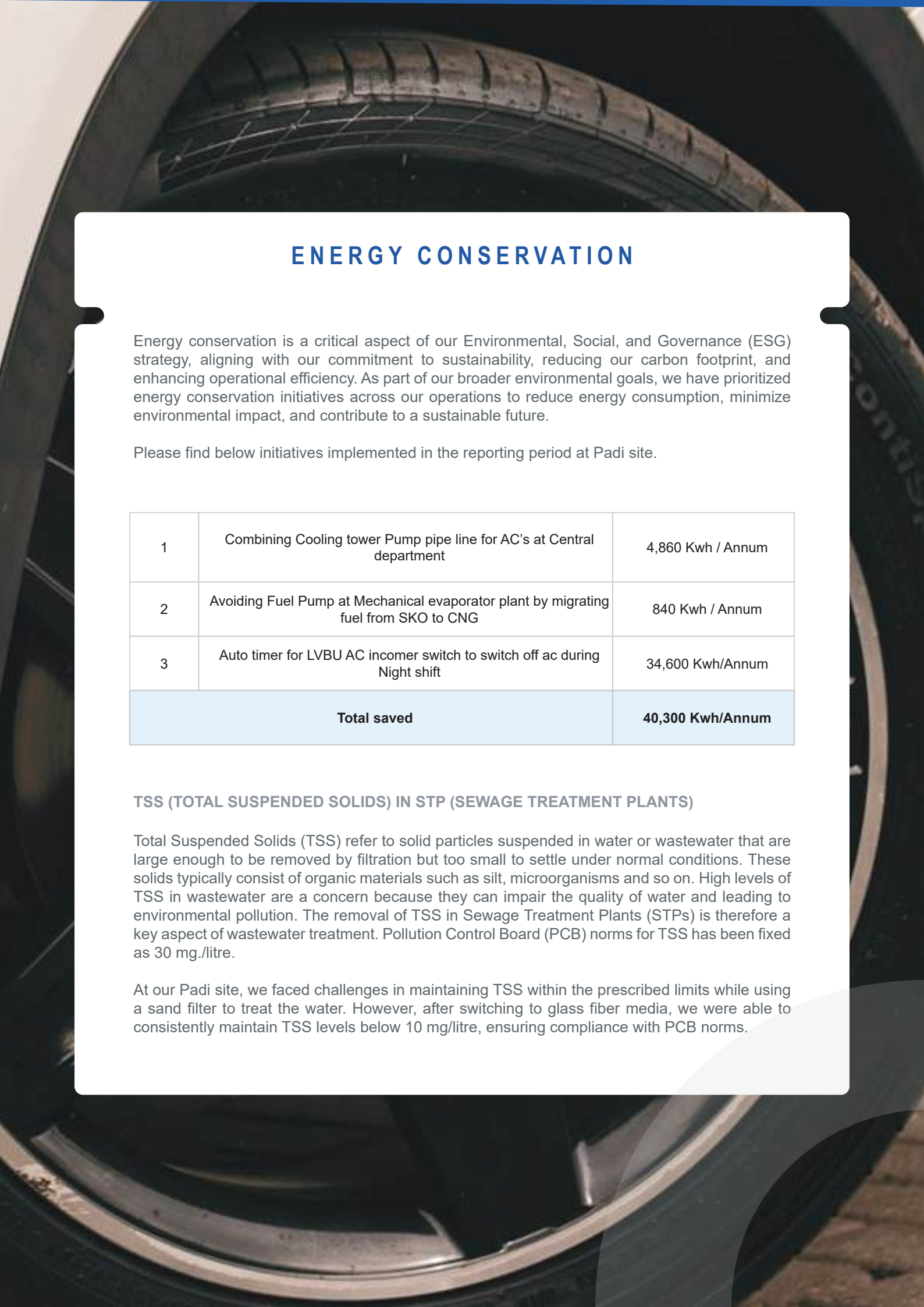
Year	Rainwater harvesting pond capacity in KL	Rainwater utilization in KL	Third party water procurement in KL
FY 2022-23	14,000	650	6,900
FY 2023-24	18,450	12,000	4,481

Rainwater harvesting pond before enhancement

Rainwater harvesting pond after enhancement

Electrical heater introduced in place of Diesel burner in 2 ton ladle preheater resulted in 190 kiloliter of diesel eliminated for FY 2023-24.

Electrical heater introduced in place of diesel burner



ENERGY CONSERVATION

Energy conservation is a critical aspect of our Environmental, Social, and Governance (ESG) strategy, aligning with our commitment to sustainability, reducing our carbon footprint, and enhancing operational efficiency. As part of our broader environmental goals, we have prioritized energy conservation initiatives across our operations to reduce energy consumption, minimize environmental impact, and contribute to a sustainable future.

Please find below initiatives implemented in the reporting period at Padi site.

1	Combining Cooling tower Pump pipe line for AC's at Central department	4,860 Kwh / Annum
2	Avoiding Fuel Pump at Mechanical evaporator plant by migrating fuel from SKO to CNG	840 Kwh / Annum
3	Auto timer for LVBU AC incomer switch to switch off ac during Night shift	34,600 Kwh/Annum
Total saved		**40,300 Kwh/Annum**

TSS (TOTAL SUSPENDED SOLIDS) IN STP (SEWAGE TREATMENT PLANTS)

Total Suspended Solids (TSS) refer to solid particles suspended in water or wastewater that are large enough to be removed by filtration but too small to settle under normal conditions. These solids typically consist of organic materials such as silt, microorganisms and so on. High levels of TSS in wastewater are a concern because they can impair the quality of water and leading to environmental pollution. The removal of TSS in Sewage Treatment Plants (STPs) is therefore a key aspect of wastewater treatment. Pollution Control Board (PCB) norms for TSS has been fixed as 30 mg./litre.

At our Padi site, we faced challenges in maintaining TSS within the prescribed limits while using a sand filter to treat the water. However, after switching to glass fiber media, we were able to consistently maintain TSS levels below 10 mg/litre, ensuring compliance with PCB norms.

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	2-2 Entities included in the organization's sustainability reporting	Reporting Period and Boundary	6
	2-3 Reporting period, frequency and contact point		
	2-4 Restatements of information	-	-
	2-5 External assurance	Not Applicable	-
	2-6 Activities, value chain and other business relationships	About Brakes India Private Limited	9
	2-7 Employees	About Brakes India Private Limited	
	2-8 Workers who are not employees	Occupational Health and Safety	57
	2-9 Governance structure and composition	Governance framework	23
	2-10 Nomination and selection of the highest governance body	Confidential	-
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	2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability Committee	27
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	2-14 Role of the highest governance body in sustainability reporting		
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	2-18 Evaluation of the performance of the highest governance body		
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GRI 3: Material Topics 2021	3-1 Process to determine material topics	Stakeholder Engagement and Materiality Assessment	29
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GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Responsible Business	33
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	303-4 Water discharge		
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Emission Management	42
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	305-4 GHG emissions intensity		
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GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Waste Management	51
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GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Occupational Health and Safety	57
	403-2 Hazard identification, risk assessment, and incident investigation		
	403-3 Occupational health services		
	403-4 Worker participation, consultation, and communication on occupational health and safety		
	403-5 Worker training on occupational health and safety		
	403-6 Promotion of worker health		

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GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Training and Education	59
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Brakes India

A TSF Group Company

Corporate Office

Brakes India Private Limited,
Padi, Chennai - 600 050

Registered Office

Brakes India Private Limited,
21, Patullos Road, Chennai - 600 002

(044) 2625 8161
info@brakesindia.com

LinkedIn

Website