# Madras Fluorine Pvt. Ltd.

No. 266, Express Highway, Manali, Chennai-600068, Tamil Nadu, India.

## GHG EMISSION & REDUCTION PLAN


| Doc No | Issue No | Rev No | Date |
|---|---|---|---|
| MFPL/ESG/F-480 | 01 | 00 | 8th April, 2024 |

## 1. Introduction

At MFPL, a premier manufacturer and supplier of inorganic fluorine and boron chemicals, we are dedicated to integrating Environmental, Social, and Governance (ESG) principles into our operations. Sustainability is at the core of our business, and we proactively measure, manage, and report our Greenhouse Gas (GHG) emissions to mitigate our environmental impact. Our GHG emissions assessment encompasses both upstream and downstream activities, reflecting our commitment to transparency and accountability throughout our value chain. Upstream activities include emissions from raw material extraction, transportation, and supplier operations, while downstream emissions are linked to product distribution, usage, and end-of-life disposal. This comprehensive approach enables us to track and address emissions at every stage, fostering continual improvement in reducing our carbon footprint. By regularly reporting these insights, we demonstrate our alignment with global sustainability goals and our pledge to contribute to a greener future.

## Methodology

At MFPL, a leading manufacturer and supplier of inorganic fluorine and boron chemicals, sustainability is the foundation of our operations. Guided by Environmental, Social, and Governance (ESG) principles, we actively measure, manage, and report Greenhouse Gas (GHG) emissions to minimize our environmental impact. Our GHG emissions assessment covers the entire value chain, including upstream and downstream activities, ensuring transparency and accountability at every step. Upstream emissions arise from raw material extraction, transportation, and supplier operations, while downstream emissions relate to product distribution, usage, and end-of-life disposal.

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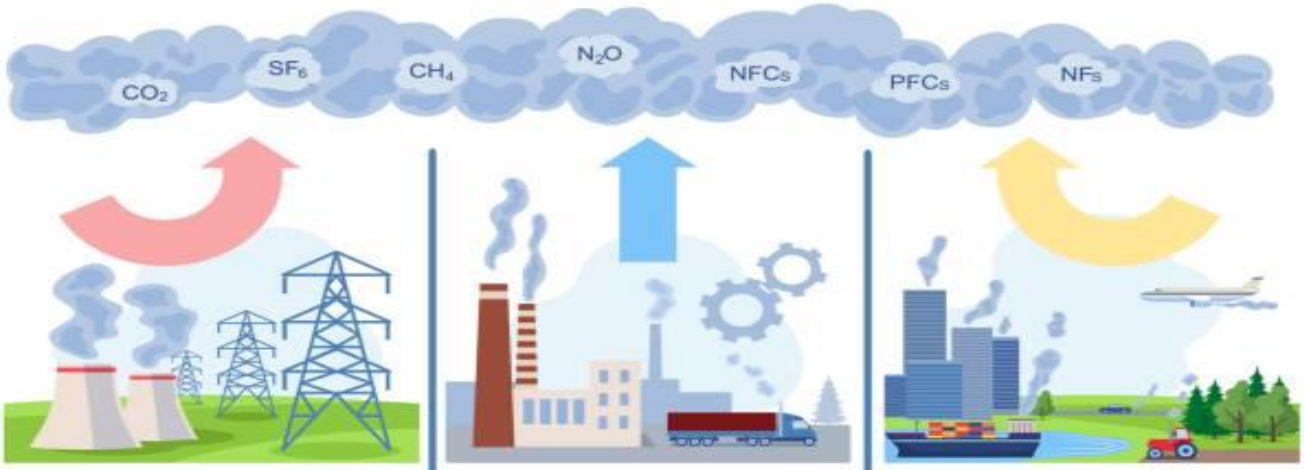
# SCOPES OF EMISSIONS



## 2. GHG EMISSIONS

### Scope 1

MFPL's Scope 1 emissions primarily arise from two key sources: on-site fuel combustion and company-owned vehicles. On-site fuel combustion includes emissions generated during the operation of boilers, furnaces, and other manufacturing equipment essential for production processes. These activities are critical to maintaining operational efficiency but contribute directly to our GHG footprint. Additionally, company-owned vehicles used for transportation and logistics emit greenhouse gases as part of daily business operations. Together, these sources represent a significant portion of direct emissions, emphasizing the need for targeted measures to optimize fuel use and transition to cleaner alternatives.

### Scope 2

Emissions from purchased electricity for manufacturing processes represent a significant part of MFPL's Scope 2 emissions. As a manufacturer and supplier of inorganic fluorine and boron chemicals, electricity is essential to power our machinery, equipment, and facilities, contributing to our production capacity and operational efficiency. However, the generation of electricity typically involves the combustion of fossil fuels, which releases carbon dioxide and other greenhouse gases into the atmosphere.

### Scope 3

Indirect emissions from the generation of purchased electricity consumed by MFPL fall under Scope 2 emissions, reflecting the greenhouse gases released during the production of electricity that we use to power our operations. To minimize our carbon footprint, we are focused on reducing our electricity consumption and transitioning to cleaner energy sources. This includes investing in energy-efficient technologies, implementing smart energy management systems, and exploring renewable energy solutions, such as solar panels or wind power.

## 3. EMISSION SUMMARY

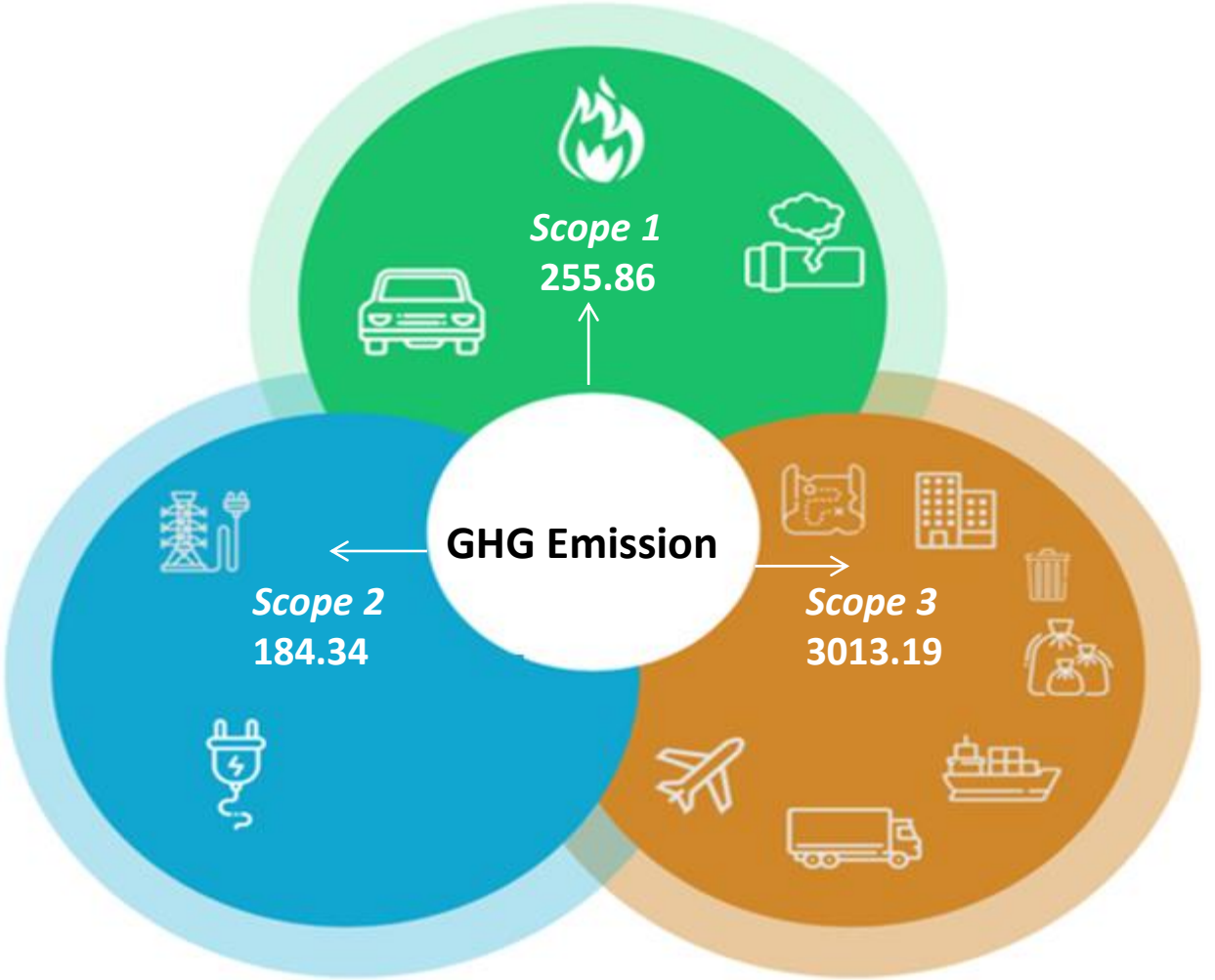
Locations covered

**Madras Fluorine Pvt Ltd**

No. 266, Expess Highway, Manali, Chennai-600068, Tamil Nadu, India.

**Calculation period: April 2023 to March 2024**
**All values in MT CO2 e**

| EMISSION TYPE | BASELINE 2023-2024 (TONNES CO2e) | CURRENT YEAR 2023-2024 (TONNES CO2e) | TARGET 2024 -25 | TARGET 2030 |
|---|---|---|---|---|
| Scope 1 | 255.86 | 255.86 | 10% | Net Zero |
| Scope 2 | 184.34 | 184.34 | 10% | Net Zero |
| Scope 3 Downstream | 18.25 | 18.25 | 10% | Net Zero |
| Scope 3 Upstream | 2994.94 | 2994.94 | 10% | Net Zero |
| Scope 3 | 3013.19 | 3013.19 | 10% | Net Zero |
| Total | 3453.39 | 3453.39 | 10% | Net Zero |


Scope 1
255.86
GHG Emission
Scope 2
184.34
Scope 3
3013.19

## 4. GHG Emission Reduction Plan

## ➢ Dedicated Budget for GHG Management:

MFPL has allocated an annual budget of GHG emission management initiatives, demonstrating our commitment to environmental stewardship and sustainability. This investment is focused on several strategic areas aimed at reducing our carbon footprint and aligning with our ESG goals. A portion of the budget is dedicated to renewable energy projects, such as the installation of solar panels and partnerships with clean energy providers, to decrease reliance on non-renewable power sources and lower Scope 2 emissions. We are also investing in energy-efficient technologies to optimize our manufacturing processes, reduce energy consumption, and improve overall operational efficiency. Additionally, part of the budget is earmarked for carbon offsets, enabling us to mitigate emissions that cannot be eliminated entirely through direct measures.

## ➢ Management Team Dedicated to GHG Emissions Reduction:

MFPL has established a cross-functional sustainability team led by the Chief Sustainability Officer (CSO) to spearhead its GHG reduction and sustainability initiatives. This dedicated team comprises experts from various domains, including production, energy management, and environmental compliance, ensuring a holistic approach to addressing environmental challenges. By leveraging diverse expertise, the team drives strategic planning, implementation, and monitoring of sustainability projects. The CSO provides leadership and aligns the team's efforts with organizational goals, ensuring accountability and progress. This structure enables MFPL to effectively integrate ESG principles and achieve measurable results in reducing its environmental footprint.

## ➢ Management Team's Compensation Linked to GHG Reduction Targets:

MFPL has implemented performance metrics tied to achieving annual GHG reduction milestones to encourage accountability and focus on sustainability goals. These metrics are integrated into the evaluation criteria for relevant team members, ensuring that progress in reducing emissions is prioritized across the organization. To further incentivize success, the company has introduced a bonus structure with a 20% weight assigned to meeting GHG targets, aligning employee rewards with environmental performance.

# Time-bound Action Plan

### Reduce Energy Consumption

MFPL is committed to reducing Scope 2 emissions by transitioning to renewable energy sources such as solar, wind, and biomass to meet power needs. This shift will significantly lower our carbon footprint and support our sustainability goals. We plan to establish power purchase agreements (PPAs) with renewable energy providers, ensuring a consistent supply of clean energy and reducing dependence on non-renewable sources. These agreements will not only bolster our commitment to environmental stewardship but also align with industry best practices for sustainable energy use. By investing in renewable energy solutions, MFPL aims to contribute to a greener, low-carbon future.

### Increase Use of Renewable Energy

MFPL is dedicated to reducing Scope 2 emissions by transitioning to renewable energy sources such as solar, wind, and biomass for its power requirements. This strategic move will lower our carbon footprint, enhance sustainability, and align with our environmental goals. To strengthen this commitment, we will establish power purchase agreements (PPAs) with renewable energy providers, ensuring a consistent and reliable supply of clean energy.

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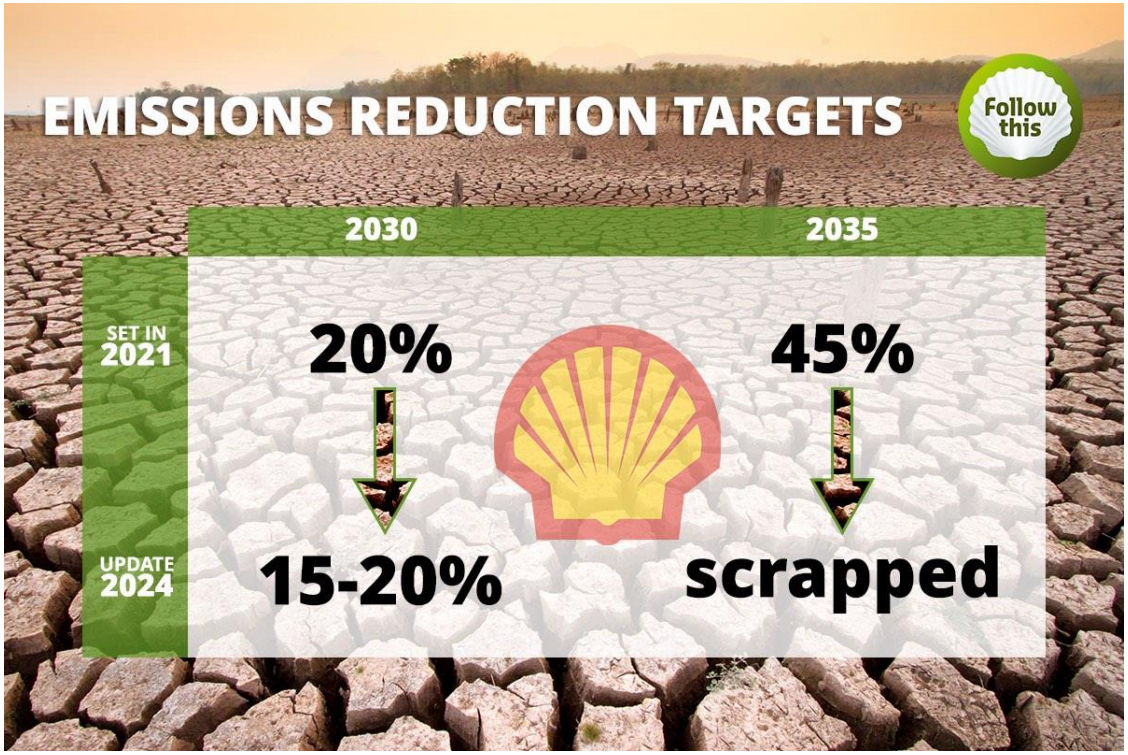
## Reduction Targets for GHG Emissions:



## Scope 1:

Shift to Biofuels Transition from traditional fossil fuels to biofuels for manufacturing equipment and company-owned vehicles to reduce carbon emissions. **Target Date:** 10th January, 2025

Upgrade Combustion Technology Replace existing combustion systems with advanced, low-emission burners and engines that comply with the latest energy efficiency standards. **Target Date:** 8th July, 2024

Optimize Production Processes Introduce process modifications that minimize fuel consumption during manufacturing, such as heat recovery systems and improved combustion efficiency. **Target Date:** 11th February, 2025

Regular Equipment Maintenance Implement a strict maintenance schedule for all combustion equipment to ensure optimal performance and minimal emissions. **Target Date:** 8th March, 2027

Reduce Idle Times Establish policies to minimize vehicle idling time, incorporating GPS tracking to optimize routes and reduce fuel use. **Target Date**: 16th April, 2026

Install Emission Control Devices Equip high-emission machinery with pollution control devices like scrubbers or catalytic converters to capture and reduce emissions at the source. **Target Date**: 10th May, 2024

Use Low-Emission Materials Incorporate low-emission materials and fuels into the manufacturing process, focusing on reducing the environmental impact of chemical reactions. **Target Date:** 22nd September, 2026

Employee Training Programs Provide targeted training for employees to implement energy-saving practices during production, such as optimizing machinery use and reducing unnecessary fuel consumption. **Target Date:** 27th June, 2024

## Scope 2:

Commit to purchasing renewable energy from certified providers to reduce emissions associated with electricity consumption **Target Date:** 24th January, 2024

Establish long-term contracts with renewable energy suppliers to ensure a consistent supply of clean energy at a lower carbon footprint. **Target Date:** 9th June, 2026

Install solar panels, wind turbines, or other renewable energy sources to generate clean power directly at the manufacturing facility. **Target Date:** 23rd October, 2024

Retrofit existing equipment with energy-efficient models that reduce electricity consumption without compromising production output. **Target Date:** 16th May, 2025

Replace traditional lighting systems with LED lights and install smart controls for automated switching and dimming to lower energy use. **Target Date:** 12th April, 2027

Upgrade heating, ventilation, and air conditioning (HVAC) systems to more efficient, energy-saving models that use less electricity. **Target Date:** 10th November, 2025

Implement an EMS to continuously monitor, analyze, and manage energy usage across all production and administrative areas for optimal efficiency. **Target Date:** 8th October, 2026

Conduct training sessions to encourage employees to adopt energy-saving practices, such as turning off equipment when not in use. **Target Date:** 20th March, 2024

Participate in demand response programs to reduce electricity consumption during peak times, aligning with grid stability efforts and reducing emissions. **Target Date**: 23rd September, 2026

Conduct periodic energy audits to identify areas of high energy use, ensuring that corrective actions are taken to minimize unnecessary consumption. **Target Date:** 16th June, 2025

**Scope 3**:

Partner with key suppliers to promote sustainable practices and encourage the adoption of low-emission technologies and materials. **Target Date:** 11th February, 2025

Develop policies that prioritize sourcing raw materials from suppliers who use renewable energy and environmentally-friendly processes. **Target Date:** 27th June, 2024

Regularly assess and monitor the carbon footprint of suppliers to ensure compliance with SSC's sustainability standards and identify areas for improvement. **Target Date:** 7th March, 2027

Initiate joint projects with suppliers to explore and implement emission-reducing technologies or practices across the supply chain. **Target Date:** 22nd October, 2026

Provide training programs for suppliers on sustainable practices, efficient resource usage, and emission reduction strategies. Target Date: 8th November, 2025

Enhance the design of carton boards and boxes to minimize material usage, increase recyclability, and improve energy efficiency throughout the product lifecycle. **Target Date:** 8th May, 2024

Incorporate recycled materials and eco-friendly alternatives in product manufacturing to lower emissions from raw material extraction and processing. **Target Date:** 23rd September, 2026

Conduct a lifecycle analysis for products to understand the full environmental impact, from material extraction to end-of-life disposal, and make informed design changes accordingly. **Target Date:** 10th April, 2027