2024

Creating the future togheter

NIPPON GASES
The Gas Professionals

Sustainability Report Nippon Gases Italia
Fiscal year ending 31st March 2024

Our guiding principles

Our Group's top priorities include employee excellence, safety, compliance, environmental sustainability, customer focus, and financial results.
All Nippon Gases employees adhere strictly to our principles of safety, compliance, diversity, and inclusion.

Our philosophy

Proactive. Innovation. Collaborative.

Making life better through
the technological applications of our gases.

Gas Professionals.

Our vision

Our goal is to create social value through innovative solutions in our gases applications to increase industrial productivity, improve welfare and contribute to a more sustainable future.

Reading Guide
Nippon Gases Italia - part of the Nippon Sanso Holdings Corporation (NSHD) group - uses the accounting period from 01.04 to 31.03 in line with financial reporting. The information contained herein relates to the 2023 financial year (from 1st April 2022 to 31st March 2023), referred to in the text as "Fiscal Year 2023" or "FYE2023".

For the sake of brevity, Nippon Gases Italia will be referred to in this document as Nippon Gases Italia, meaning all the Italian companies of the Group.

Publications
Current edition: 2024 Sustainability Report, with data for the financial year from 1st April 2023 to 31st March 2024. Previous edition: Sustainability Report 2023, with data for the financial year from 1st April 2022 to 31st March 2023.

For further information
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Chapter 1

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Creating the future together

Nippon Gases Italia, part of **Nippon Gases Euro-Holding S.L.U. (NGE)** controlled by **Nippon Sanso Holdings Corporation (NSHD)** hereinafter also referred to as the “Group”, is the strategic partner for technical, food, medical, pure, specialty and refrigerant gases in Italy.

Nippon Gases Italia offers its solutions to a wide range of markets, with technological offerings ranging from the most efficient supply options to applications tailored to each customer or partner.

Nippon Gases Italia’s commitment to its customers, employees and collaborators and the communities in which it operates reflects its dedication to safety, the environment and sustainability.

Nippon Gases Italia, like the entire Group to which it belongs, defines itself as "the Gas Professionals", and in fact all the companies have the same objective: **“Making life better through gas technology ”.**

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Letter to Stakeholders

Proactivity, innovation and collaboration are the values that guide us every day in our mission to improve the quality of people's lives. We operate with a deep commitment to the environment and our community, delivering advanced technological solutions for the application of our gases.

In this report, we highlight our achievements in FYE2024, along with the initiatives we've undertaken and the projects we've implemented to advance sustainability.

Creating the future together

For over a century, we have been committed to creating social value through innovative solutions in our gases applications to increase industrial productivity, improve welfare and contribute to a more sustainable future.
Sustainability, a core value of our entire Group, is reflected in tangible actions and projects focused on enhancing environmental protection, employee safety and community well-being.

FYE2024 was marked by significant geopolitical instability, resulting in economic uncertainty, rising commodity prices and a general slowdown in industrial production. Despite these challenges, Nippon Gases Italia has successfully adapted to the tough environment, leveraging key strategies to continue growing and turning obstacles into opportunities for innovation.

We demonstrated our resilience by crafting new strategies to navigate change with professionalism and proactivity and by forging new partnerships to build a better future together.

Working for more than just the present

Reflecting on the past year, the support from our Japanese parent company, Nippon Sanso Holdings Corporation (NSHD), and our European parent company, Nippon Gases Euro Holding, empowered us to persist with determination on our growth journey, backed by a substantial strategic investment plan. We are excited to announce the launch of Nippon Gases Green Energy S.r.l., a new company specialising in renewable energy sources and emerging technologies, which began operations at the start of 2024. Nippon Gases Green Energy embraces a new industrial and technological model to advance the ecological transition, with a focus on safety, ethics, and reducing greenhouse gas emissions as its primary objectives.
Building on last year's strategy, in FYE2024 we went beyond acquiring new business by making substantial investments to expand our production capacity and enhance our customer relationships. We focused particularly on key sectors crucial for the sustainable development of Italian industry, including food, medical and manufacturing.
Every day, we look to the future by providing our customers with innovative and sustainable gas technology solutions and applications.

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Towards a Carbon Neutral world

We firmly believe that businesses have a vital role in the fight against global warming. For this reason, we have embarked on a strategic journey toward a carbon-neutral future, fully aligned with the directives of our European group and Japanese parent company. In practical terms, this involves implementing internal measures to minimize our environmental impact while also developing solutions that assist our customers in reaching their CO_2 reduction goals.

Carbon neutrality can be achieved by promoting the shift from fossil fuels to renewable energy sources and actively supporting companies through this challenging transition, which in turn helps tackle the issue of climate change. We assist our customers on their decarbonisation journey through a range of initiatives, such as adopting green combustion solutions to reduce fossil fuel consumption, promoting Green Hydrogen as a low-emission alternative, implementing advanced technologies for CO_2 capture and reuse, embracing circular economy practices to turn waste into value, and leveraging digitalisation to optimise production processes for greater sustainability.

Our commitment begins with us: our current production processes demand significant energy, and road transport is still the primary method we use to serve our customers. We are focusing our efforts on these areas, committed to contributing through investments and projects aimed at decarbonisation, reducing energy and water consumption, and minimising waste production, all to limit the environmental impact of our activities.

Stronger thanks to our People

Our greatest strength is our people, who bring passion and dedication to our mission every day. The growth of our company is deeply connected to our ongoing commitment to employee well-being and maintaining a high-quality work environment. That's why we are committed to providing each employee with the opportunity to grow professionally in an environment where merit, competence and dedication drive career advancement.

Workplace health and safety is our top priority, and we continuously work to ensure full compliance with, and promotion of, all relevant regulations and principles.

We want to express our renewed gratitude to all our employees, who are the true driving force behind our company and have made it possible to achieve the goals and complete the projects detailed in this Sustainability Report.

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"At the core of our strategy is a commitment to innovation and excellence in people, which enables us to attract and retain top talent and customers, laying a strong foundation for sustainable growth in the future."

Raoul Giudici

President, Nippon Gases Europe from 1st July 2024

"Our goal is to create business value that is also social value through a circular and sustainable creative process. We want to be able to dare, dream, inspire and think big by aiming to make a difference for customers and employees in a stimulating and positive work environment."

Eduina Marino

President and CEO Nippon Gases Italia from 1st April 2024

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1.1 Nippon Gases Italia

Since 2018, Nippon Gases Italia has been part of the Japanese multinational group **Nippon Sanso Holding Corporation** (NSHD), which is present in Europe through the **Nippon Gases Europe**.

Cryogenic, technical, food, medical, refrigerant, pure or specialty gases: our goal is to adhere to the highest standards of quality, safety and dependability. The aim of Nippon Sanso Holding Corporation is to create social value through **innovative gas solutions** in order to increase industrial productivity, to enhance people's wellbeing, contributing to a more sustainable future.

Nippon Gases Italia firmly believes that its technological applications are fundamental to improving the future step by step and to creating a harmonious relationship between individuals, companies, and our planet.

Safety, compliance, diversity and inclusion are the core values that guide everything we do.

Safety	Compliance	Diversity and inclusion
— All accidents and injuries can be prevented. — Safety is the responsibility of line management. — Every employee is responsible for their own safety. — Every employee must stop a job if it cannot be done safely. — Efforts in safety yield results in safety. — Respect for the safety rules is a condition of employment.	— All compliance breaches can be prevented. — Compliance is the responsibility of line management. — Every employee is responsible for their own ethical behaviour. — Every employee must stop a job if it cannot be done ethically. — Efforts in compliance yield results in compliance. — Ethical behaviour is a condition of employment.	— Diversity and inclusion are an opportunity for our work. — Inclusion is a line management accountability — Every employee is responsible for being a model of inclusive behaviour. — Every employee must avoid non-inclusive actions or conduct. — Efforts in diversity and inclusion will increase engagement and improve results. — Inclusiveness is a condition of your employment.

For more than 100 years, Nippon Gases Italia has worked in the invisible but essential world of gases, transforming a fundamental element such as air into products that can improve the life of everyone.

With its know-how consolidated over the years, Nippon Gases Italia enables different realities to operate in a more sustainable and productive manner, enhancing the efficiency of industrial processes and ensuring the highest standards in medical applications.

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1.2 Nippon Gases in the world

Nippon Gases Italia, part of **Nippon Gases Euro Holding**, itself part of the **Nippon Sanso Holdings Corporation,** is one of the benchmark companies in Italy for the production, distribution and sale of technical, food, medical, pure, specialty and refrigerant gases. The goal of the **Nippon Gases Italia** is to contribute to the development of a stronger society, ensuring the supply of safe, dependable products.

On 1st October 2020, Nippon Sanso Holdings Corporation was born. NSHD controls the operational companies, such as **Matheson** (USA), **Nippon Gases Euro-Holding** (Europe), **Taiyo Nippon Sanso** TNSC (Japan), **Thermos**, and the other companies that are active in Asia and Oceania.

The creation of the NSHD holding made a decisive contribution in taking a further step forward the process of globalisation of our Group, promoting the sharing of talents, resources and best practices, with obvious advantages in various operational areas, such as compliance, human resources, legal and insurance, marketing, operations, purchasing, productivity, safety and sustainability.

The Nippon Sanso Holdings Corporation Group is Japan's main industrial gas manufacturer and one of the five most important industrial gas suppliers in the world.

The Group has over **20,000 employees** and operates in more than **30 countries** and regions around the world, including Southeast Asia, Korea, China, India, Australia, and the United States.

NSHD supplies essential products and services to various sectors, including the steel, chemicals, energy, electronics, automotive, construction, food, and healthcare.

Over **20,000**
Employees worldwide

Over **31**
countries

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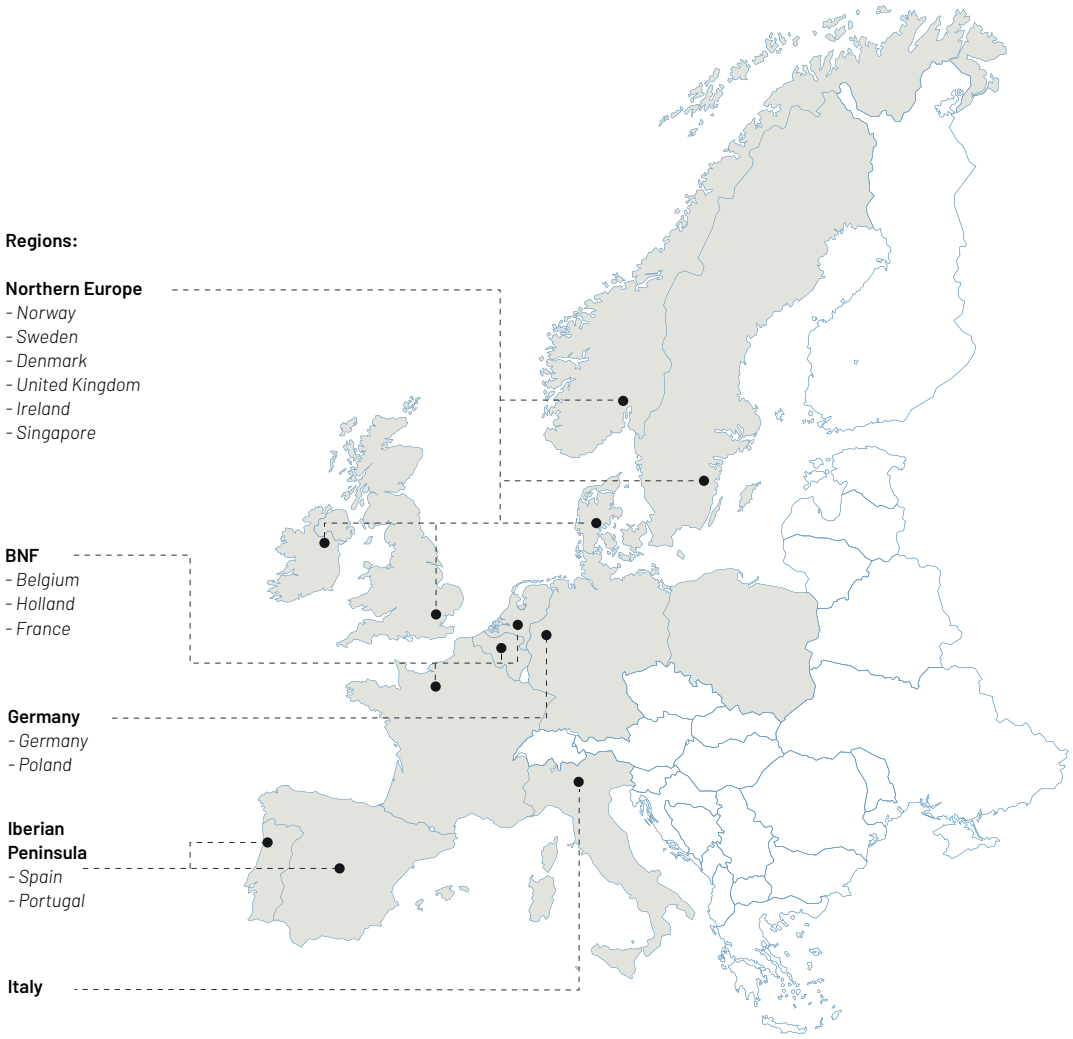
1.2 Nippon Gases in the world



Regional Logos:

All regions
NIPPON GASES The Gas Professionals
Iberian Peninsula
NIPPON GASES Welding & Cutting
OXIMESA NIPPON GASES
NIPPON GASES Healthcare
Italy
DRYCE NIPPON GASES
HOME MEDICINE The e-Healthcare Company
NOXTEC NIPPON GASES
Northern Europe
NIPPON GASES Offshore

13
Countries

Over **3,000**
Employees throughout Europe
of which **27.9% women**

Over **150,000**
Customers

About **€ 1.9 billion**
Turnover in FYE2024

The group has a wide range of industrial gases and equipment and devices to use them, as well as systems and technologies.

All activities are performed by highly qualified personnel who are defined as: "The Gas Professionals" i.e. Gas Professionals.

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Compared to the plants in Italy, important innovations took place in FYE2024: Nippon Gases Italia continues to invest in **central and southern Italy**.

Following the refurbishment of the **Pontinia,** air fractionation plant, which became operational in the second half of 2021 to produce technical gases, this plant received approval in 2022 to produce food gases and in 2024 to produce medical gases.

At the end of April 2023, **Enel Green Power Italia** and Nippon Gases Operations signed an agreement for the construction of a new plant for the recovery, purification, and liquefaction for food purposes of CO_2 naturally present in the geothermal fluids of the **Piancastagnaio** plants, in the province of Siena. It is estimated that the amount of "green", CO_2 reused by this circular economy project is equivalent to around 30% of the national demand for "pure" **carbon dioxide.** This significant investment is part of a series of initiatives by the Nippon Gases Group aimed at enhancing production capacity, competitiveness, and customer proximity in Italy, all with a focus on sustainable growth.

Additionally, the new fractionation plant in **Caserta** is set to begin operations in summer 2024, following the acquisition of all necessary authorisations.
In December 2023, an audit has been conducted in Nippon Gases operations sites in Castelnuovo Berardenga (SI), Rapolano Terme (SI), and Ferrara to secure Kosher certification for the food-grade carbon dioxide produced at these facilities. Kosher certification identifies foods that are suitable for consumption by those who observe Jewish dietary laws.

A key development in FYE2024 is the establishment of **Nippon Gases Green Energy**, a company focused on renewable energy and new technologies. Fully owned by Nippon Gases Italia, Nippon Gases Green Energy is characterised by its innovative industrial and technological model for navigating the ecological transition. Its main objectives include **reducing greenhouse gas emissions**, developing energy from sustainable sources, and creating technological solutions for alternative and synthetic fuel production.

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1.2 Nippon Gases in the world

1 Headquarters

21 Sales offices

2 Pipelines

2 Special Gases production plants

6 Air Separation Units* (one of which is under construction)

4 CO_2 production plants

3 Hydrogen production plants

15 Filling centers

5 Storehouses

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713
employees over 96% with permanent contracts 25% women

Over 100
years of history

300
between agencies and dealers

Over 15,000
Customers

495.4
M€ of revenue in fiscal year 2024

13 Bulk production plants
15 Filling centers

** The map shows: the headquarters, sales offices, production plants and warehouses of the companies Nippon Gases Italia S.r.l., Nippon Gases Industrial S.r.l., Nippon Gases Operations S.r.l., Nippon Gases Pharma S.r.l., Nippon Gases Refrigerants S.r.l., Nippon Gases Industrial Sud S.r.l. and Nippon Gases Pharma Sud S.r.l., also included the primary production sites belonging to two companies in which Nippon Gases Italia holds a non-majority stake (Consorzio Novigas in Novi Ligure and Chemgas S.r.l. in Brindisi).*

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1.3 Over 100 years of history

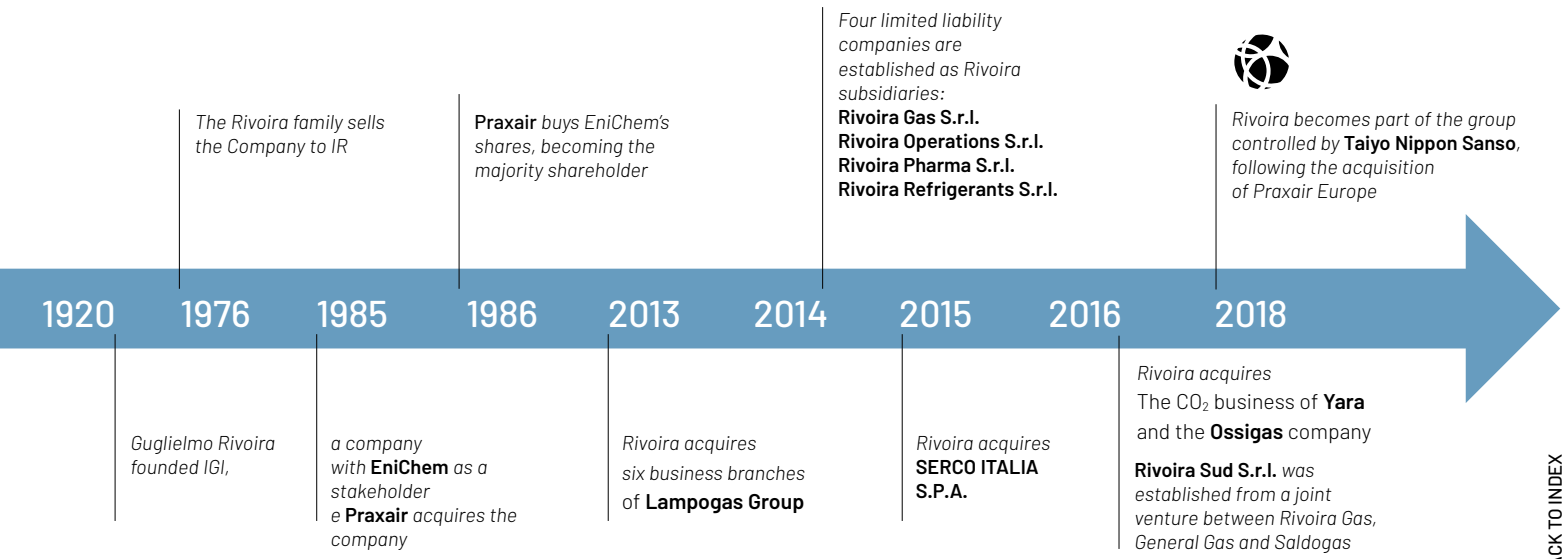
Nippon Gases Italia, formerly Rivoira, has showcased remarkable adaptability and innovation over its more than 100-year history.

The ability to change in step with a changing world and the courage to reinvent oneself daily have been the cardinal principles of the company's evolution and will continue to guide it in the future.

The story of Nippon Gases Italia is a synthesis of the history of **Italian industry** in the last century. Born as a family-run business, for a while it was controlled by state institutions, before entering the global market by becoming part of two great multinational groups.

During the course of **over a century**, the history of the company proceeded in parallel with key periods in the development of the Country: from the second world war to the reconstruction of the post-war years, from the economic boom to the turbulent 1970s, and lastly to face the global challenges of the new millennium.

In 2020, the Group celebrated its first 100 years of history in a year marked by the emergence of the Covid-19. During this critical period, **Nippon Gases Italia** played a crucial role in significantly ramping up oxygen production and distribution, ensuring effective care for patients both in hospitals and at home, and aiding in the swift establishment of new emergency facilities. The Group has implemented the necessary **safety measures** required by the authorities to limit infections, while guaranteeing all operational activities, and has promptly reorganised working arrangements to protect the health of its employees.



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During **2021**, the Group resumed its growth path, overcoming the many difficulties of the global economy through continuous improvement in the areas in which it already operated and by breaking into new markets.

Nippon Gases Italia also responded with professionalism and dedication to numerous difficulties during the past fiscal year, once again demonstrating its ability to adapt and seize the opportunities presented by investing in growth at the Italian level.

Loyalty to the company, initiative, a sense of duty and team spirit have been distinctive traits Nippon Gases Italia's workers throughout its century-long existence, enabling it to overcome setbacks and **constantly evolve**.

These characteristics, which are still present today, allow Nippon Gases Italia to look to the future with confidence.

2019
Rivoira Refrigerant Gases S.r.l.
was created through a joint venture between Rivoira and Sapio. Rivoira publishes its first **Sustainability Report**

2020
Rivoira turns **100**,
Becomes **Nippon Gases Italia** *and acquires Pontinia (Latina- Italy) manufacturing site*

2021
Nippon Gases Pharma S.r.l.
creates a new joint venture **Home Medicine S.r.l.**

2022
Construction of the ASU in Caserta begins

2022
Nippon Gases Pharma S.r.l.
acquires **Noxtec Development S.L.**
on 1st April 2022

2023
Effective 1st April, 2023, **Nippon Gases Pharma S.r.l.** *acquired 100% of Domolife S.r.l., which is now known as* **Nippon Gases Pharma Sud S.r.l.**
Acquisition of minority interest in **Hysytech S.r.l.**

2024
Nippon Gases Green Energy S.r.l.
Is born

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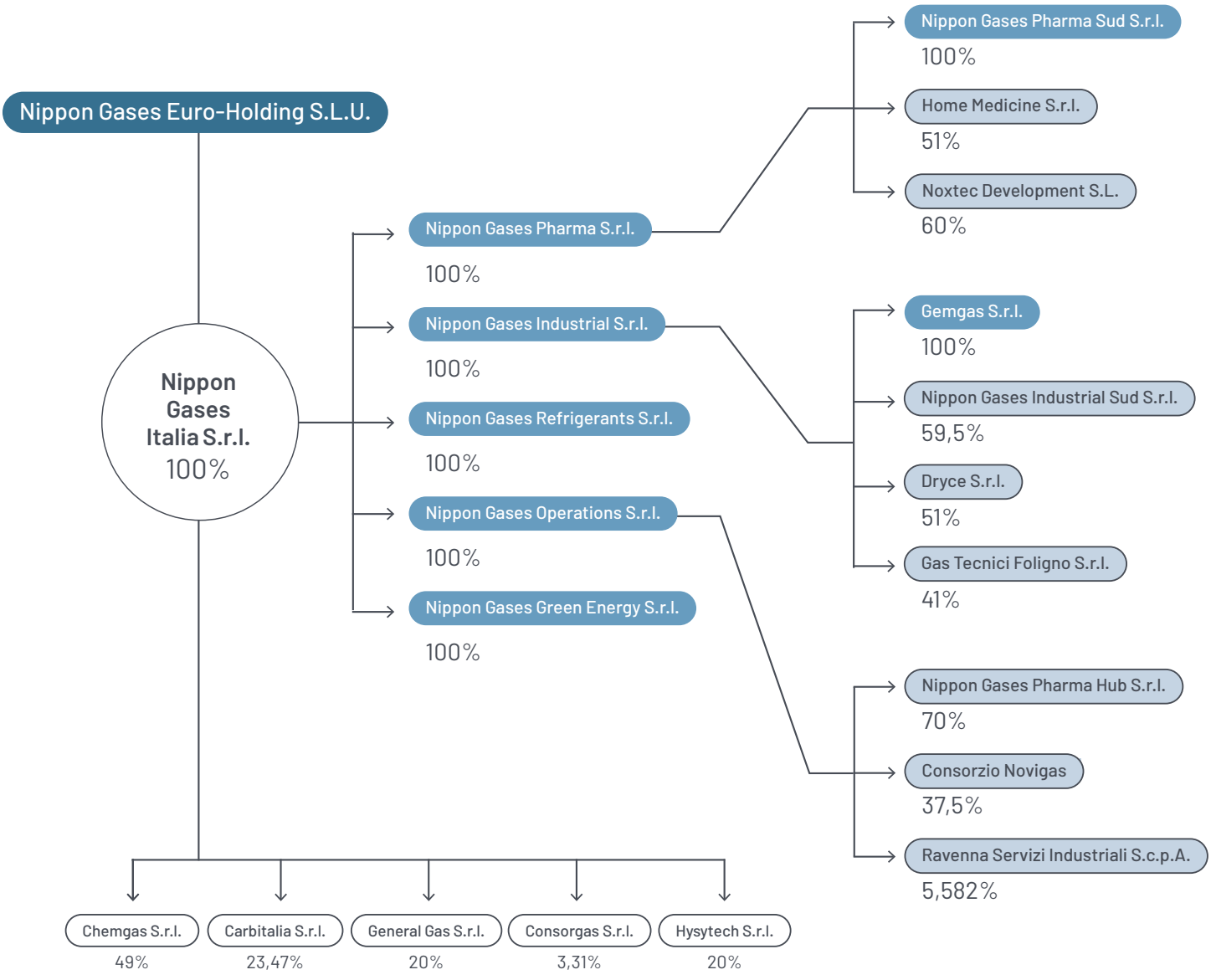
1.4 Corporate structure

For Nippon Gases Italia, health, safety, environmental, and quality policies, along with continuous improvements in performance and production processes, are the core pillars of company operations and ensure the satisfaction of customers, employees and collaborators.

These values are embodied in all the companies belonging to the Nippon Gases Italia Group, each of which focused in a specific sector.



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Nippon Gases Italia S.r.l.

Nippon Gases Italia S.r.l., holding company of the Italian group,is responsible for defining the strategy, providing directives, and ensuring that **all subsidiaries receive** the services necessary for proper and effective operations, enabling them to provide the best products and services to their customers.

Nippon Gases Italia supports operating companies with key functions such as:

- Human Resources;
- Finance;
- Administration and Control;
- Legal;
- Health, Safety, Environment and Quality;
- Procurement;
- Communication;
- IT, Productivity and Customer Support Services.

Additionally, it is deeply committed to safeguarding **health** and **safety** at work and **protecting the environment**.

Nippon Gases Industrial S.r.l.

Nippon Gases Industrial S.r.l. Is a market leader offering a wide range of product and services tailored to the needs of **various industries**, including the metalworking, chemical, mechanical, food and tertiary sectors. The Company offers personalised solutions and develops new technologies to meet the needs of individual companies. The core activities of **Nippon Gases Industrial** include the production and sale of compressed and cryogenic gases, as well as the supply of technical, food, pure and specialty gases. The Company provides **services, materials, equipment and systems** for different gas users, from large industry to R&D laboratories. The **Nippon Gases Industrial** primary goal is to satisfy market needs, offering competitive and practical solutions. Moreover, the company promotes the use of renewable sources and he reduction of energy consumption, ensuring a pervasive presence throughout Italy. In March 2015, with the aim to strengthen its presence in the industrial gas market of southern Italy, the Group established Nippon Gases Industrial Sud as a joint venture between Nippon Gases Industrial, Saldogas and General Gas. The main products supplied by Nippon Gases Industrial are atmospheric gases: Oxygen, Nitrogen, Argon, and rare gases (products of the purification, compression, cooling, distillation, and condensation of the air), process Gases, and specialty gases: Carbon Dioxide, Helium, Hydrogen, process gases for semiconductors.

Nippon Gases Operations S.r.l.

Nippon Gases Operations S.r.l. manages the **operational activities:** production and distribution of liquid gas as well as the distribution of compressed gases in cylinders.

The company is dedicated to producing **high-quality cryogenic liquid gases** while adhering strictly to health, safety and environmental protection regulations. The Company is focused on optimizing production and distribution of the products, through a rigorous cost control, and continuous improvement of processes.
Fueled by a strong drive for innovation and a constant focus on safety and the environment, **Nippon Gases Operations** has led efforts to reduce raw material consumption, energy use and waste generation for years.

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Nippon Gases Refrigerants S.r.l.

As of December 2023, Nippon Gases Refrigerants S.r.l., which has been active in the **air conditioning** and **refrigeration** market since 2019, became a wholly owned subsidiary of Nippon Gases Italia through the acquisition of all shares from the previous joint venture. Today, is one of the foremost Italian company in its sector, offering the most complete range of refrigerant gases, air conditioning, and heat pumps on the market, as well as the management of regeneration and disposal services of refrigerant gases. The company's extensive network of branches, dealers, and agencies **across the country** allows it to deliver prompt and high-quality services to its customers. Nippon Gases Refrigerants possess an in-depth knowledge and the technologies of **Chemours, Honeywell, Daikin and Arkema**. the main global producers of refrigerant gases.

Nippon Gases Green Energy S.r.l.

Established in 2024, Nippon Gases Green Energy S.r.l. focuses on **producing and selling energy**, fuels, and chemicals derived from renewable and biogenic sources. The company will also have the capability to enter related markets that emerge from the valorisation of waste generated by these processes. This includes reusing captured **Carbon Doxide**, producing intermediates and derivatives for agricultural and agronomic applications, and developing the Bio-Hydrogen market as an energy carrier for civil, industrial, and mobility sectors.

Nippon Gases Green Energy will also engage in researching and developing decarbonisation technologies. Nippon Gases Green Energy's mission aligns closely with the ambitious targets set by Europe in the **"Fit for 55"** plan, which aims to achieve a 55% share of renewable energy by 2030.

The ecological transition is both a challenge and an ethical commitment for modern society, driving all production activities to adopt sustainable revisions of processes and raw materials while increasingly shifting towards renewable energy sources. Nippon Gases Green Energy aligns perfectly with this ambitious vision, bringing its expertise and professionalism to identify the most advanced technologies for producing and utilising renewable energy, while fully respecting the environment and local communities."

Davis Reginato
General Manager Nippon Gases Industrial and Nippon Gases Green Energy

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Nippon Gases Pharma S.r.l.

Nippon Gases Pharma S.r.l. develops and promotes the national market for medical gases through two divisions: **Hospitalcare** in the hospital environment and **Homecare** in the home environment. Medical gases are an important segment in healthcare institutions for the treatment of pulmonary pathologies and respiratory assistance.

Nippon Gases Pharma guarantees its customers by ensuring safe, reliable products and services, as well as pursuing sustainable development. The gases sold by the Hospitalcare division to hospitals and local health authorities throughout Italy, and include **Oxygen, Nitrogen, medical air, blends** for therapeutic and diagnostic use, **specialty gases of high purity** for analysis and research, liquid Nitrogen for cryotherapy, and gas blends for sterilization. Over the years, Hospitalcare has broadened its services to include environmental **air quality** analysis and air **sanitation/ purification** for hospital settings.

Through its Home Care division, Nippon Gases Pharma liquid and gaseous **Oxygen** therapies, **mechanical ventilation** to patients being assisted in their homes and, from 2024, **enteral nutrition** services. At the end of March 2024, the company received CE certifications in accordance with the EU Medical Device Regulation 745/2017 for implants classified as medical devices.

Nippon Gases Pharma Sud S.r.l.

The company Nippon Gases Pharma Sud S.r.l., whose name prior to 1st April 2023 was **Domolife S.r.l.**, is a company in which Nippon Gases Pharma holds 100% of the shares as of October 2022. The company is mainly engaged in **home oxygen therapy** and **respiratory therapy**.

The company's policy has always been to work continuously and actively with members of the medical community to provide services and treatments for patients with **respiratory diseases**. Moreover, it provides additional personalized services to contracting facilities for patients' healthcare management needs. Thanks to its experience and **structure, Nippon Gases Pharma Sud** is also involved in the sale and supply of electro-medical equipment and medical devices to healthcare professionals and individuals.

Home Medicine S.r.l.

The company Home Medicine S.r.l., a joint venture between **Nippon Gases Pharma S.r.l.** and **Aqua S.r.l.**, specialises in the provision and organisation of home care services combined with **telemedicine** services.

The main purpose is to monitor vulnerable patients who have complex clinical needs and multiple chronic conditions. At the centre of its innovative action, **Home Medicine** puts basic applied research, to define new healthcare protocols, devices and digital health services for the total wellbeing of the patient.

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With the acquisition of this company, Nippon Gases Pharma wanted to create a new business with the aim of becoming a market reference in Italy and Europe. The company aims to offer **cutting-edge services and technologies** in a rapidly developing sector such as telemedicine.

Noxtec Development SL

To meet the needs of the nitric oxide therapy market, **Noxtec Development SL**, a Group company, specialises in developing solutions based on inhaled **Nitric Oxide**.

Equipment for administering inhaled Nitric Oxide therapy is among the achievements of Noxtec Development, establishing it as a leading figure in the medical sector. The company relies on a competent, experienced, and specialised team focused on the core values of both partners: reliability, quality, safety and sustainability.

Dryce S.r.l.

Dryce S.r.l. is a subsidiary of Nippon Gases Italia, founded in 1998 as a joint venture between Nippon Gases Italia and the **Marotta Group**, originally a dry ice distributor. Over the years, the company has enriched its product range to become one of the leading companies in the design, manufacture and validation of controlled temperature packaging for the transport of pharmaceuticals, biologicals and vaccines.

The company offers specialised solutions for the transport of all products that need to be stored at low temperatures. Thanks to its expertise, **Dryce** has also set itself apart in the market through product innovation. Specifically, the company has developed **ThermoKube** and **ThermoBlock**, two 100% Italian-made solutions for keeping vaccines at a preset temperature for between 5 and 10 days, depending on transport requirements.

These are advanced **isothermal containers** consisting of internal thermal insulation provided by state-of-the-art vacuum panels with very low thermal conductivity.

They are designed to withstand the very low temperatures of **dry ice** and have an extremely low sublimation rate, allowing cold chain shelf life similar to that certified by pharmaceutical companies.

GemGas S.r.l.

GemGas S.r.l., whose sole shareholder is Nippon Gases Industrial, is mainly active in the supply of food and industrial gases to **small industries** and **end users**. By constantly updating its technology and expanding its range of services, the company has become a beacon of reliability for many customers.

GemGas S.r.l. offers three main product lines:

- **Mister Frizz®**: is a line of systems and consumables for the treatment of drinking water for home and office use;
- **Mister Baloo®**: is the line of products made for parties, helium cylinders, latex and foil balloons, etc.;
- **Mister Work®**: is the line of technical gases, ideal for traders, operators and for users who occasionally use gases and need practical and simple;
- **Air purification:** a range of disinfection and air purification products to improve indoor air quality, human well-being, and energy efficiency.

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Hysytech S.r.l.

Hysytech S.r.l., founded in **2003**, is a subsidiary of Nippon Gases Italia from **2022**, specializes in designing, developing, and industrially implementing new technologies and turnkey process equipment.

The two companies have combined their expertise to develop and consolidate value growth through low-carbon technologies and solutions.

This initiative reaffirms NSHD Group's commitment to providing **carbon neutral solutions** to industry and helping customers achieve their carbon reduction targets.

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1.5 The value chain of Nippon Gases Italia

Nippon Gases Italia is one of the most important national producers and distributors of industrial, food, medical, pure, specialty, and refrigerant gases. Nippon begins with a simple element-the air-and transforms it, responding to the customer's every request: wherever, however, and whenever it's needed.

Nippon Gases Italia's value chain represents the sum of the organisation's key processes and activities. This approach gives insight into how the Group creates **value** along its entire operational process, from production to distribution.

Depending on the volume of gas required, Nippon Gases Italia helps the customers to choose the most suitable containers for their needs. Among the solutions offered are **pipeline** for continuous supply of large volumes of gas, **mobile or static tanks** from 1,500 to 60,000 litres, installed at customers' sites, and a wide range of different **pack** and **cylinder** sizes.

Bulk production, or primary production, involves three types of facilities: **Air Separation Units (ASU)**, CO_2 production plants, and Hydrogen production plants **(HyCo)**.

Oxygen, Nitrogen and Hydrogen are distributed directly through dedicated pipeline when the customers are located near the production units. Nippon Gases utilises special pipelines tha allow for large volumes of gas with continuous delivery necessary for their needs.

For customers who require large quantities of gas and who are not located close to Nippon Gases Italia's main sites, the Group offers the design, construction, installation and management of **on-site plants** for the production of oxygen, nitrogen and hydrogen and for the recovery and purification of CO_2 directly at the customer's site Nippon Gases Italia also offers the possibility of installing **storage tanks** of various sizes and capacities, which are supplied with liquid product in tanks at customers' production units.

The production of **compressed gas**, or secondary production, is carried out at the **filling centres** or package plants. These gases are distributed throughout the country through direct sales, agents and resellers.

The filling centres produce a wide range of gases, including industrial gases, food gases, medical gases, high purity speciality gases and refrigerant gases.

Nippon Gases introduced **cylinder packs** for compressed gases that are filled at 300 bar and offer around 45% more product than the traditional 200 bar cylinder packs. In the coming years, the Group plans to expand the use of the 300-bar cylinder pack to additional regions.

In addition to these gases, Nippon Gases also sells other products such as Acetylene, Ammonia and Chlorine. In September 2023, the **Chivasso** site received authorization for the production of phytosanitary products. Starting in November 2023, it began producing **Frutil®**, a nitrogen and ethylene mixture used in the food industry for fruit ripening.

Nippon Gases organizational structure, made up of distribution centers, agencies, and a flexible sales network, ensures a **wide presence** throughout the country. It also offers a special blends feasibility service that allows laboratories and research institutes to request customized studies of pure and specialty gases ensuring high complexity, accuracy and certification.

With its own **ISO 17025** accredited laboratory, Nippon Gases is able to prepare new blends with ad hoc adjustments for any customer need. For each cylinder it issues a certificate specifying the composition of the gas blend contained within. This capability enables us to meet customer requirements with precision and reliability, while upholding high standards of quality and safety.

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1.5 The value chain of Nippon Gases Italia

Bulk Production

HyCO plants (S. Salvo, Ravenna, Novi Ligure*)

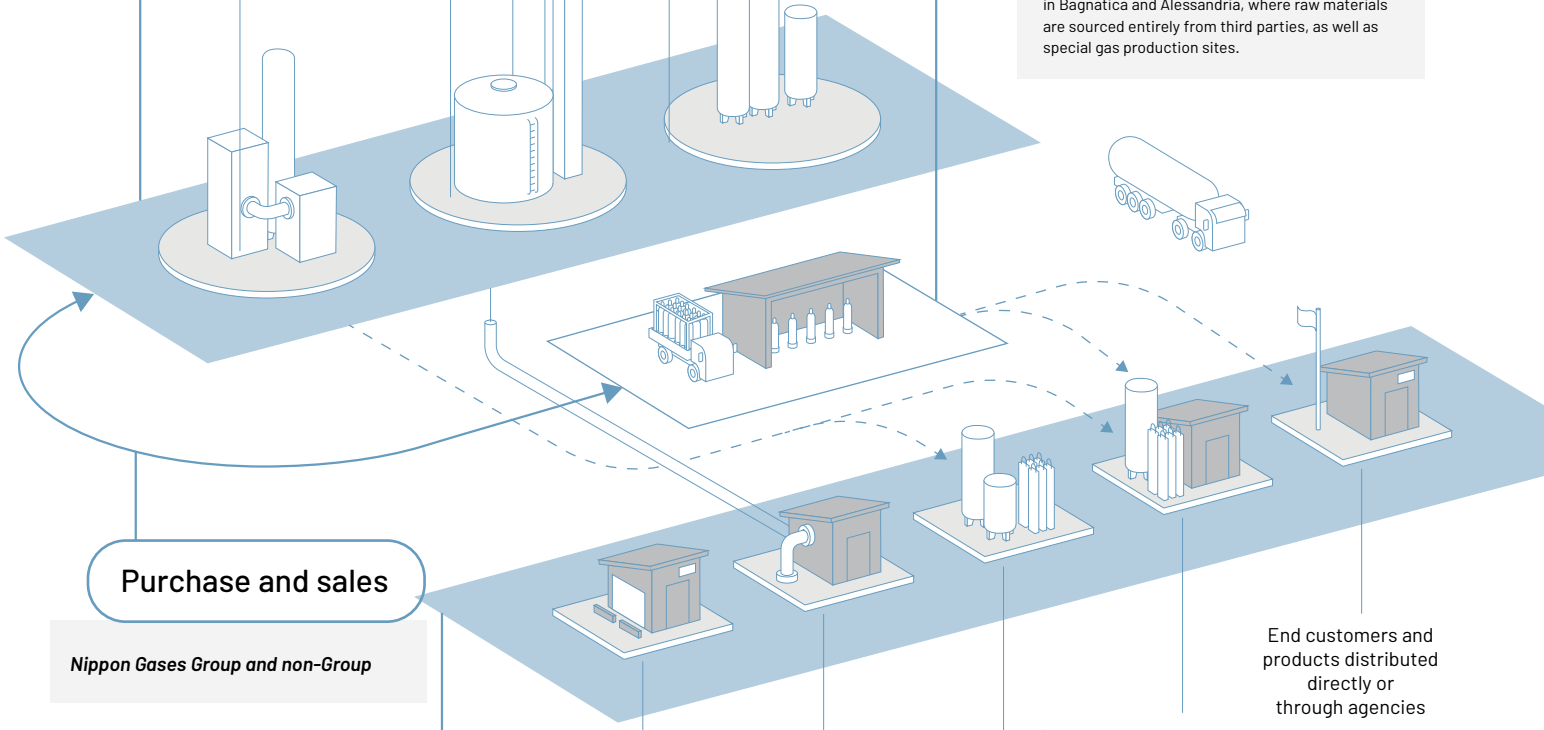
Air Separation Unit (Verrès, Ravenna, Pontinia, Novi Ligure*, Brindisi* and Caserta under construction)

CO_2 production plants (Castelnuovo B.ga, Rapolano Terme, Ferrara**)

Bundling package

Filling centers
Secondary production

It also encompasses refrigerant gas production sites in Bagnatica and Alessandria, where raw materials are sourced entirely from third parties, as well as special gas production sites.



Purchase and sales

Nippon Gases Group and non-Group

End customers and products distributed directly or through agencies

Customers with tanks installed at their plants

Customers with installations on-site

Customers served by pipeline

End customers, sale of materials, plant, equipment and services

Distribution and sale of products/services

Innovation, research, and development of new solutions

Customer support services and credit management

Technical Support Service

** The Brindisi and Novi Ligure plants are part of two companies in which Nippon Gases Italia holds a minority interest.*

*** The Ferrara plants are owned by Nippon Gases Italia but are managed by third parties.*

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Nippon Gases offers its customers also the **Cryo Service**, which provides on-site filling of small to medium (30L to 240L) liquid Nitrogen cryogenic storage containers via a tank. The service is designed to guarantee operational convenience and at the same time a secure **filling** process, eliminating users' exposure to risks associated with handling cryogenic gases during transfer, such as burns and under-oxygenation.

Besides gas supply; Nippon Gases offers a wide range of **services** that guarantee the quality, reliably and safely of gases and their applications.

It also partners with customers to develop new technological solutions and to optimize their **processes** in various areas, such as energy and environmental sustainability, production efficiency, safety, and quality.

Nippon Gases provides its customers with a 24/7 **technical support** service that takes care of all activities related to the management of customers' on-site systems, from designing, installing and maintaining the systems to handling the containers.

The main services offered are:

- **Pre and after sales technical and technological support service** from Nippon Gases, including analysis of system performance, statutory updates, and process optimisation, customised for specific customer requirements. Since 2021, the Group has been dedicated to transforming this service from basic customer support to a more comprehensive and tailored model. This new model improves the quality of technical assistance by increasing and diversifying the "core" offer with new support and collaboration services;
- The **Total Gas Management** service i.e complete supply management, from regular checks on the functioning of the systems to storage management of the products offered. This service is fully customisable to meet the customer's specific needs;
- The **remote monitoring service** to safeguard the customer's systems and processes and improve flexibility in order management. The service provides for the monitoring cryogenic tanks filling levels, allowing various parameters specific to the storage and distribution system to be controlled. In this way, any anomalies can be quickly identified and reported. Nippon Gases Italia is able to monitor the system remotely, evaluating in real time any actions that may be required. This system optimizes refueling trips by planning them according to the customer's actual needs;
- The **NPS (Nitrogen Pumping System)** is designed for pipeline clearing, plant and tank reclamation, inerting, rapid cooling of reactors and equipment, cryogenic cleaning and leak detection;
- E-learning and classroom customized **training courses** designed to ensure gases can be used correctly and safely. The courses are structured according to the theoretical and operational needs of each customer, offering a flexible and adaptable approach to different training needs.

Nippon Gases Italia provides a customer support service (back office) that includes order management, planning of scheduled and extraordinary maintenance interventions, and arrangement of the quality and safety documentation.

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1.6 Nippon Gases' commitment to sustainability

The concept of sustainable development can be traced back to 1987, when it was defined in "Our Common Future," a report by the **Brundtland Commission** of the United Nations Environment Program, as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The term **"sustainability"** has become widely used, and everyone-from individuals to companies and institutions-is urged to contribute to enhancing social and environmental standards. The goal is to build a better world and protect our planet.

The European Union, in particular, has set ambitious expectations by launching the **European Green Deal**. This framework of policies and measures aims to achieve carbon neutrality across the continent, making it the first to undertake such a comprehensive approach. European Commission President **Ursula von der Leyen** highlighted that the Green Deal is "our new growth strategy, designed to reduce emissions and create jobs."

For the first time, the industrial sector was called upon to adopt a new business model to minimise its impact in terms of emissions and raw materials consumption. In the words of its most authoritative representative, the european governance is asking EU companies not only to generate profit but also to be sustainable, with a view to safeguarding the interests of all stakeholders.

Nippon Gases Group strongly aligned with this vision. Sustainable development is is one of guidelines and we make sure that the sustainability principles extend to all areas of our business, from production to provision of gases and services to our relationships with employees suppliers and partners

For the Group, sustainable development is also the engine for continuous improvement. In this context, the publication of our fifth **Sustainability Report** on a voluntary basis reflects how the company's commitment to sustainable development has contributed to developing enhanced awareness, thanks to a careful analysis of its value creation process and transparent communication to all its stakeholders regarding the impacts generated and the actions undertaken on a daily basis to mitigate such impacts.

A significant example is the monitoring of indirect greenhouse gas emissions, an activity already started in the previous fiscal year.

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Nippon Gases Europe medium-term sustainability plan

In September, 2015, the governments of the 193 member countries of the United Nations General Assembly defined the **17 Sustainable Development Goals (SDGs)** that determine the social, environmental and economic goals to be achieved by 2030. The SDGs, divided into 169 targets, are part of an ambitious action program for peace and well being of people and the planet, known as the **2030 Agenda for Sustainable Development**.

The SDGs are founded on the integration of the environmental, social, and economic dimensions of sustainable development: from rethinking a circular and sustainable consumption model to the construction of resilient infrastructures, from water treatment plants to a careful management of water resources and the promotion of sustainable energy sources. This challenge encourages institutions, companies and citizens to make their own contributions to achieve such goals at global level.

Nippon Gases Europe is determined to support the 2030 Agenda in a proactive manner, by incorporating into its company strategy the SDGs selected by the Sustainability Committee as pertaining to the European Group's business perimeters and company strategy, capable to creating a positive impact with its activities.

The commitment to sustainability was originally aimed at continuously improving our reputation and create value, but now more than ever Nippon Gases Europe sees sustainability as a cornerstone of its corporate strategy. In January 2022 **Nippon Gases Europe Sustainability Committee** approved the **Mid-Term Sustainability Plan for FYE2022 - FYE2026.**

Climate change
Innovation and technology

Carbon neutrality
Energy from renewable sources

Environment

Environmental Management
Productivity programme
Use of resources - Water
Waste management

People

Human capital
Employee engagement
Diversity and inclusion
Stakeholder and communities

Safe operation

Health and Safety
Customer and product safety

Ethics and Compliance

Governance bodies
Human rights
ESG risk management
Sustainability Reporting certification
Product Carbon Footprint certification
Procurement. Supplier ESG engagement

Within these five business areas, 31 initiatives have been further defined in the **FYE2022 - FYE2026 Medium-Term Plan** defined by the European parent company.

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In this plan, Nippon Gases Europe, combining the United Nations Sustainable Development Goals with the materiality matrix prepared by the Nippon Sanso Holdings Corporation, has identified **10 SDGs** as drivers of its sustainability strategy:

These 10 SDGs encompass the primary focus areas and reflect Nippon Gases Europe's commitment to actively advancing **global sustainability** through targeted and innovative initiatives.

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As part of the NSHD Group, Nippon Gases Europe has defined initiatives for the various areas of interest in line with the medium-term sustainability plan in order to achieve the defined goals The governance and follow-up of the Plan is directly managed by the European Sustainability Committee, which reviews progress against **sustainability targets** at quarterly meetings. The progress of the various initiatives is published annually in the Nippon Gases Europe Sustainability Report.

Carbon Neutral Program I (CNP I)	The programme aims to reduce the Group's GHG emissions by 18% in FYE2026 and 32% in FY2031 (compared to 2019 emissions) through the use of innovative technologies, with the goal of achieving neutrality by 2051.
Carbon Neutral Program II (CNP II)	The programme aims to reduce greenhouse gas emissions by encouraging customers to adopt solutions, products and applications with a reduced environmental impact, with the goal of generating a positive contribution of emissions saved greater than the greenhouse gas emissions generated by the Group by FYE2026.
Zero Waste Program (ZWP)	The programme is based on waste management according to the 3Rs (Reduce, Reuse, Recycle) principle.
Sustainable Water Program (SWP)	The programme aims to conserve water resources through the efficient use of water in business activities.
Safety First Program (SFP)	The programme aims to improve safety in the industrial gases sector worldwide, with the goal of maintaining a Lost Time Incident Rate (LTI) ≤ 1.6.
Quality Reliability Program (QRP)	The programme promotes a quality-focused culture to raise employee awareness through the introduction of automation technologies.
Talent Diversity Program (TDP)	The programme promotes diversity within the Group with the aim of achieving 18% women in management positions by FYE2026 and 22% by FYE2031, and 22% female employees by FYE2026 and 25% by FYE2031.
Compliance Penetration Program (CPP)	The programme promotes compliance, awareness and understanding among all employees, with the goal of achieving a 100% compliance training rate.

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Nippon Gases Italia and sustainable development goals

In line with what Nippon Gases Europe has defined, Nippon Gases Italy has also developed a sustainability action plan, contributing to achieve the objectives set at European level.

Building on the main areas of intervention identified by the European parent company, Nippon Gases Italia has developed specific programs and targeted initiatives to achieve its objectives, aligning them with both the organisational and national context. These initiatives are in addition to the reporting activities that Nippon Gases Italia has been carrying out voluntarily for several years reflecting the Group's view of the future challenges. The results achieved by the Nippon Gases Europe Group in relation to its sustainability targets are published in the Nippon Gases Europe Sustainability Report 2023 and are reported below.

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SDG Goals	Midterm Initiatives of,Nippon Gases Europe	Target	Results as of April 2024
Climate Change/Innovation and Technology			
	**Reduction of GHG emissions**: Reduction rate of total CO_2 emission (%) in absolute value (t) from FYE2019	Reduction of 29% in FYE2026 Reduction of 35% in FYE2031	● **On Track** 30.2% vs FYE 2019 Baseline
	**Carbon Neutrality:** Expand products and services that enable customers to reduce CO_2 emissions. Increase the rate of CO_2 reduction contribution to customers	Contribution to major emission reductions	● **Ongoing** Customer emission reduction contribution 1.05 Mill TCO_2 > Emission 0.9 Mill TCO_2
	**Carbon Neutrality:** Biomethane production by Anaerobic Digestion of Wastewater treatment sludge.	Achieving 8 units per year, each with an average output of 500 m^3/h, totaling 281 GWh annually	● **Ongoing** Extended permit approval times delay project development
	**Carbon Neutrality:** Promotion of biomethane as a source to produce green or low-carbon hydrogen for small/medium customers.	Producing 6 units per year, each with an average output of 240 m^3/h	● **Ongoing** There are currently 2 projects under development, but permit approval times are still lengthy
	**Renewal Energy:** Continue promotion of renewable energy share.	35% Renewable Energy	● **Ongoing** During the 2024 fiscal year, 20% of energy will come from renewable sources, with additional efforts focused on securing Guarantees of Origin (GO)
	**Productivity projects:** promote productivity generating Sustainable Development cumulative savings FYE2022-FYE2026.	50,000 Eq. CO_2 Tons	● **On Track** Compared to the base year, FYE2019 achieved a reduction of 60,000 tonnes of CO_2
Environment			
	**Water:** Continue to reduce the intensity of water use (vs. Sales) n all our operating facilities. Reduction rate of water consumption intensity. Base year FYE2020	Reduce water consumption intensity by 10% relative to sales	● **On Track** Water Intensity Reduction > 30%
	**Waste:** Reduction rate of waste disposal intensity (vs. Sales). Base year FYE2020	Reduce waste disposal intensity by 11% relative to sales	● **On Track** Wastes intensity Reduction > 30%
	**Logistics:** Continue to take advantage of data-driven technologies and improve the efficiency of our logistics by right-sizing our tank and cylinder bundles. Base year FYE2022	Achieve a 6% reduction in GHG emissions from product transportation	● **Ongoing** The target is at risk, as efficiency has not improved compared to the reference year
	**Environmental Management System ISO 14001:** Improve participation of operational sites	>80% operation sites	● **On Track** >79% operation sites

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SDG Goals	Midterm Initiatives of,Nippon Gases Europe	Target	Results as of April 2024
People			
	**Diversity and Inclusion:** Increase of female population and its managerial and specialist participation.	30.5% Female 28.5% Women in specialist and managerial positions	**On Track** 28.49% Female 31.35% Women in specialist and managerial positions
	**Employee engagement:** Evaluation of employee engagement. Improve Sustainable Engagement Index	≥85%	**On Track** Sustainable Engagement rated at 88 in the last survey
	**Community engagement:** Coordinate social and community initiatives in the areas where we are present. Base Year FYE2022	Increase the number of participants, funds and projects by 30%.	**Ongoing** 90 projects with a total of 606 participants
	**Young people:** Commitment to increase the number of positions for young local diverse talent in the organisation.	Increase the number of internships by 3% per year	**On Track** 74 number of trainees in the organisation in FYE2024
Safe operation			
	Improve our RI-rate per million hours worked	RIR 1.19	**Ongoing** Average of the last 4 years: 1.45
	Improve Lost Time Injury rate (LTI) per million hours worked	LTI 0.54	**Ongoing** Average of the last 4 years: 0.96
	Preventable Product Vehicle Accident rate (Pre-PVA) per million kilometres travelled	Pre-PVAR 0.20	**On Track** 0.06 IN FYE2024
	Number of damages to Nippon Gases' assets.	12/year	**On Track** Number of damages to Nippon Gases' assets in FYE2024: 4
	Continue to drive campaigns as a result of analysis from incidents and assessments.	One campaign per year	**On Track** Done
	Complete the Process Safety Roadmap	To be completed by FYE2024	**On Track**
	Reinforce the European Safety & Environmental assessment program	12 European assessments per year	**On Track** 16

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	Bring employee and contractor training to a digital platform.	Complete implementation across Europe by FYE2024	**Ongoing** Planned by FYE2025

SDG Goals	Midterm Initiatives of,Nippon Gases Europe	Target	Results as of April 2024
Ethics and Compliance			
	**Customers:** Reinforcement of quality assurance and management systems.	Number of complaints with economic impact of more than 1 million JPY during FYE2023 ≤ 5/year	**On Track** 1 complaint with economic impact of more than 1 million JPY during FYE2024
	**Customers:** Satisfaction survey	As needed	**Ongoing** Customer satisfaction surveys carried out when necessary
	**Compliance:** Thorough compliance training	100% of employees receive training in compliance	**On Track** Successfully completed by 100% of selected target of employees (3348)
	**Standards:** Participate in the development of HSEQ corporate standards.	Completion of Nippon Gases Europe standards review	**Ongoing** Nippon Gases Europe is part of the NSHD Standards Board
	**Compliance:** Sustainable review of all potential integrity cases	100% review	**On Track** 100% review
	**Procurement:** Integrate environmental management and environmental, social and governance (ESG) processes with all stakeholders in the value chain. To be included in supplier contracts.	Suppliers accounting for 80% of the expenditure must be included in the new Supply Relationship Management (SRM) system. New ESG clauses to be included in European contract models.	**On Track** All suppliers accounting for 80% of the expenditure are already included in the SRM. ESG clauses will be incorporated into the new European agreement template during FYE2025.
	**Procurement:** Improve CSR risk analysis prior to supplier assessments or audits	Implement the new iRisk system as part of the process for all safety-critical, single-source suppliers.	**On Track** The supplier performance module has been fully implemented. During FYE2025, we will manage supplier performance using this system.
	**Procurement:** Improve evidence of coverage of sustainable procurement activities across the company's supplier base/operations	Incorporate the new Supplier Code of Conduct into the SRM documentation and process for selected suppliers, covering 80% of expenditure.	**On Track** The Supplier Code of Conduct has been incorporated into the intake process. In FYE2024, 259 suppliers signed the Code of Conduct.
	**Procurement:** Improve information on reporting on sustainable procurement issues	Integrate supplier productivity initiatives related to sustainability and link them to the new SRM system.	**On Track** The new SRM system enables tracking of suppliers' sustainable procurement issues from initial inclusion through to payment, including the evaluation of their sustainable performance.

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Initiatives of Nippon Gases Italia

Like Nippon Gases Europe, Nippon Gases Italia confirms its commitment to sustainability by participating in various external initiatives relevant to its stakeholders. This enables to evaluate the company sustainability strategy and make the results achieved on **ESG issues (Environmental, Social and of Governance)** visible to its stakeholders.

At the end of September 2023 Nippon Gases Industrial S.r.l. obtained the prestigious **Ecovadis platinum medal**, After receiving the gold medal for two consecutive years, the company earned the highest accolade in the ranking, underscoring its ongoing commitment to corporate social responsibility and sustainability. This recognition highlights its efforts in key areas such as the environment, diversity and inclusion, employee welfare (with a focus on safety), and ethics and human rights. This award places Nippon Gases in the top 1% of companies in the industry for its sustainability performance.

In 2023, Nippon Gases Industrial enhanced its ESG performance rating on the **Open-es platform**, achieving a score of 94 out of 100 points. This accomplishment placed the company at an advanced Open-es level of 9 out of 12. This positioning is the result of Nippon Gases Industrial and Nippon Gases Italia's awareness and continuous commitment on issues related to the 4 areas of sustainability analysed by the Open-es programme: people, planet, prosperity and governance principles.

Nippon Gases Italia, as a member of **Federchimica**, adheres to the voluntary **Responsible Care** program, to promote the Sustainable Development of the Global Chemical Industry, according to values and behaviors focused on safety, health, and the environment. In line with its commitment to this programme, Nippon Gases Italia strives for constant improvement of its products, processes and conduct in terms of health, safety, environment, management of products along their life cycle and corporate social responsibility.

Nippon Gases Europe was also reconfirmed in 2023 as a participant in the **UN Global Impact**, of which it has been a member since 2021. In fact, its membership status has been updated to reflect its registration as a subsidiary of Nippon Sanso Holdings Corporation.

2023 Best Corporate Experiences Award

As a testament to its commitment, Nippon Gases Italia was awarded the **"Premio 2023 Migliori Esperienze Aziendali" (2023 Best Company Experiences Award)** in December 2023. This accolade recognises companies in the sector that have distinguished themselves by adopting exemplary practices in contractual welfare, as agreed upon by social partners. The jury, consisting of Federchimica and trade union representatives, specifically recognized Nippon Gases Italia for the quality of its agreements on Social Responsibility in second-level bargaining. The award highlighted the positive impact of constructive dialogue and effective collaboration with trade unions, emphasizing the company's commitment to credibility, communication and transparency.

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Nippon Gases Italia's stakeholders

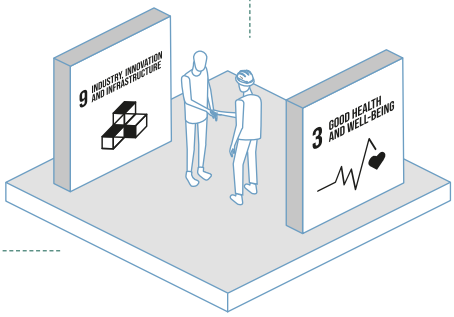
Nippon Gases Italia actively collaborates with various **stakeholder** groups, building strong and lasting relationships. We acknowledge that their participation is crucial to our long-term value creation strategy and are dedicated to sharing the guiding principles that shape our actions with them. In addition, we maintain a regular and continuous dialogue with the parent company, **Nippon Gases Euro-Holding**, to share best practices and high-level expertise.

Public and private customers

Nippon Gases Italia maintains constant communication with its customers by participating in trade fairs and public events, as well as involving them in customer satisfaction surveys and questionnaires. This approach enables the company to better address their needs in a targeted manner.

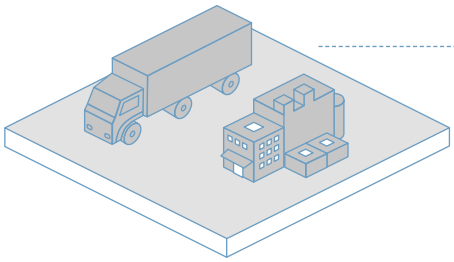
Patients

Nippon Gases Italia is dedicated to improving patient health, placing people's needs at the heart of its mission.



Employees

Nippon Gases Italia fosters a direct relationship with its employees through regular dialogue and periodic training and informational activities, utilising company and Group digital platforms such as WeShare and WeConnect.

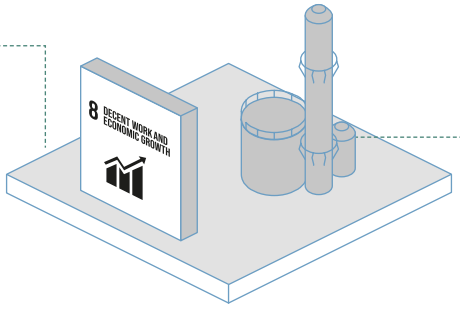


Suppliers and collaborators

In developing products for its customers, Nippon Gases Italia works closely with a diverse range of qualified suppliers, requiring them to uphold the same standards of safety, quality and conduct expected of its own employees. To achieve this, suppliers and employees are periodically invited to participate in training sessions and structured meetings, where they can exchange new ideas and focus on continuous improvement.

Local communities

For Nippon Gases Italia, maintaining dialogue with the local community is crucial for fostering joint growth and integrating the sustainable development of the entire area. To engage with the communities where it operates, Nippon Gases Italia has implemented a range of activities, including supporting local authorities and organising plant tours in collaboration with schools and universities.

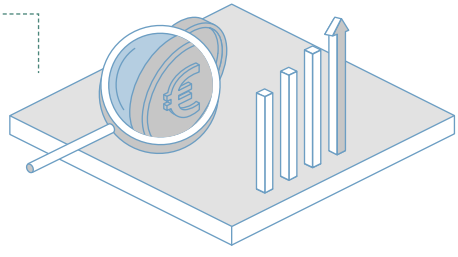


Industry associations

Nippon Gases Italia actively collaborates with various industry associations, including Assogastecnici, Federchimica, and Unione Industriale, to exchange best practices and guidelines at the national level.

Authorities and Control Bodies

Nippon Gases Italia views total transparency and regulatory compliance as essential and is committed to partnering with local authorities to advance research and innovation initiatives.



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Nippon Gases Italia's materiality analysis

For the preparation of the first Sustainability Report (FYE, Nippon Gases Italia conducted a materiality analysis, adopting the guidelines of the **GRI** the most prevalent international model for drafting sustainability documents and an international reference.
Also for the preparation of this Sustainability Report, the materiality analysis conducted in FYE2023 was confirmed and updated.

Nippon Gases Italia has defined a number of of material issues defined as the most significant impacts of the organisation on the economy, the environment, and people, including impacts on their human rights, because of its activities and business relationships.

The materiality analysis consists of **four phases**: the first three consist of an analysis of the external pressures affecting Nippon Gases Italia's operating sector, the identification of the main impacts generated or related to the Group and its value chain, and the assessment of their significance.

The fourth and final stage aims to prioritise the impacts and thus define the list of material issues: materiality determines a qualitative threshold above which an impact is considered sufficiently relevant to be reported on in the **Sustainability Report.**

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Nippon Gases Italia has carried out the following steps to determine its impact

1. A first phase of analysis of the context in which Nippon Gases operates, evaluating the value chain and the stakeholders involved, as well as analysing the industrial gases sector and global sustainability macro-trends to identify the common impacts of the category. To this end, international standards and sustainability ratings **(OECD Guidance, CDC (BII), S&P Sustainability, SASB Materiality Map, EU Taxonomy, MSCI)**, peer, competitor and media benchmark analysis results, and internal documents developed by NSHD and Nippon Gases Europe reflecting the sustainability values of the Group, were considered.

2. A second phase of analysis based on the results of the previous phase, **identified 19** economic, environmental, and human impacts applicable to Nippon Gases . The impacts have been categorised as either positive or negative and further classified according to their actual or potential nature.

3. A third phase of analysis to assess the **significance of impacts**, looking at both the severity with which actual impacts occur and the likelihood of potential impacts occurring. In accordance with the **standard GRI** methodology, the severity of an impact has been determined considering different variables, assessed on the scale of High, Medium, and Low:

- the **scale of severity** (scale), influenced by aspects such as non-compliance with laws, regulations and/or human rights violations, and the context in which the impact occurs
- **field of application** (scope) which varies depending on the stage of the company's value chain and how many of its sites are affected by the impact
- the **irremediable character**, assessed only for negative impacts, which indicates how difficult it is to repair the damage caused by the impact and varies according to whether the company has recovery systems and its ability to restore the situation before the impact.

To assess the likelihood (high, medium, low) of an impact occurring, the measures taken by Nippon Gases Italia to prevent or mitigate the impact, as indicated in the GRI Standards, were examined.

Based on the degree of likelihood and severity, each impact was classified as very relevant, relevant, moderate or negligible, as shown in the table below. The materiality threshold has been set above impacts rated as irrelevant.

4. The fourth and final phase of the process allowed for the prioritisation of significant impacts and was carried out through a **workshop**, involving all the management of Nippon Gases Italia, with the aim of perfecting the assessment of the significance of the impacts. During this workshop, the materiality threshold and therefore the **16 material impacts** for the Group have been validated. The material impacts form the basis for the development of the list of material issues on which Nippon Gases Italia has based the reporting in this Sustainability Report.

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Impact	Description	Significance
	Positive impacts	
CREATION AND CONSOLIDATION OF STABLE EMPLOYMENT (POTENTIAL)	Human Resource Management promotes the growth of individual skills and the development of teamwork, in an overall effort to attract talent and develop the skills and competencies of each individual, thus creating stable working relationships. Nippon Gases Italia is committed to attracting the best talent and engaging new generations to work together with a single mission: to improve the future through gases. To retain staff, Nippon Gases Italia guarantees a safe and stimulating working environment, corporate welfare policies and personal and professional development plans. A good relationship with trade unions ensures a strong relationship between the company and its employees.	VERY RELEVANT
DEVELOPMENT OF WORKERS' SKILLS (ACTUAL)	Through their roles and specific training, employees acquire skills that support their professional development. Nippon Gases Italia strongly believes in the importance of training and professional development of its employees and is therefore committed to providing high quality training opportunities and encourages all employees to invest time and effort to improve their skills and competencies. This is reflected in the number and variety of training courses organised each year, both face-to-face and digital.	VERY RELEVANT
CREATION AND DISTRIBUTION OF ECONOMIC VALUE IN THE LOCAL AREA (ACTUAL)	Nippon Gases Italia's activities generate economic value that is shared among suppliers, employees, investors, public administration, and the local community. Nippon Gases Italia contributes to the development of the economic fabric of the areas in which it operates, creating value that is shared among various stakeholders and generating indirect economic impacts.	VERY RELEVANT
IMPROVING THE PERFORMANCE OF PRODUCTS, SERVICES, AND PROCESSES THROUGH R&D (POTENTIAL)	Nippon Gases Italia's continuous investment in research and development projects is aimed at improving technological innovation and product quality, thus increasing the performance of products and services and maximising customer satisfaction. Nippon Gases Italia is committed to sustainable development in its plants and processes, as well as in its customers' applications, through continuous investments in digitalisation and research and development. The aim is to support collaborative innovation to improve lives through the technological applications of its gases.	RELEVANT
SHARING VALUE WITH LOCAL COMMUNITIES (POTENTIAL)	If Nippon Gases Italia involves the local community in educational initiatives and experiences, volunteering, redevelopment of the area, etc., therefore having a positive impact on the quality of life of the local community. For Nippon Gases Italia, it is important to maintain a dialogue with the territory in order to pursue a growth path that creates value for the entire community. The Group is active in the hospital sector, for example, with the creation of a respiratory rehabilitation gym at the Nemo Centre of the Niguarda Hospital and with the Ospedale del Futuro project in collaboration with the Politecnico di Milano.	RELEVANT

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Impact	Description	Significance
	Negative impacts	
DEPLETION OF WATER RESOURCES (ACTUAL)	The consumption of water resources in Nippon Gases Italia's facilities (plants, offices, etc.) depletes water resources. Every year, Nippon Gases Italia implements several solutions to improve the water consumption of its plants. At the Ravenna plant, for example, the "Water Stress Management" project was developed to reduce the water consumption of cooling towers by increasing the number of water cycles.	VERY RELEVANT
CLIMATE CHANGE CAUSED BY GHG EMISSIONS (ACTUAL)	Nippon Gases Italia's greenhouse gas (GHG) emissions contribute to ongoing climate change and depend on energy consumption for operations, transportation and any accidental GHG leaks. Nippon Gases Italia is determined to actively contribute to the reduction of greenhouse gas emissions from its activities and those of its suppliers, as well as in the transport phase, in order to reduce the impact on climate change. In particular, Nippon Gases Italia is also committed to limiting its emissions by developing specific initiatives, including partnerships where the Group operates plants at customer sites.	VERY RELEVANT
CONSUMPTION OF ENERGY RESOURCES (ACTUAL)	The production and distribution of technical gases, food, medical gases, and refrigerants is very energy intensive. Nippon Gases Italia's energy consumption mainly relates to the electricity consumption of its plants and offices and the use of fossil fuels for vehicles and plants. In order to reduce its environmental impact, Nippon Gases Italia is committed to limiting energy consumption, promoting the development of efficient energy solutions and spreading the culture of energy saving inside and outside the company. In this respect, the initiatives identified include a commitment to maintain the share of renewable energy.	VERY RELEVANT
DAMAGE TO THE HEALTH AND SAFETY OF WORKERS (POTENTIAL)	Accidents and damage to the health and safety of workers can occur during work activities along the value chain. For Nippon Gases Italia, the safety of its employees is paramount; in fact, the protection of the health and safety of its employees is a top priority and an essential cornerstone underpinning all activities. As stated in the company's HSE policy, Nippon Gases Italy considers it essential to provide all employees with adequate specific training in the field of health and safety, going beyond the legal obligations and including many additional contents and topics, in accordance with the voluntarily adopted rules, the requirements of Nippon Gases Europe and additional specific training programmes.	RELEVANT
ECOSYSTEM AND HUMAN IMPACTS OF WASTE MANAGEMENT OPTIONS (POTENTIAL)	Waste generated during operations can have a negative impact on the environment and human health if improperly managed. Every year, Nippon Gases Italia undertakes concrete actions to promote sustainable waste management throughout the value chain, seeking to maximise the recovery of waste wherever possible. In addition, Nippon Gases Italia strives to eliminate or reduce as much as possible the percentage of hazardous waste sent to landfills.	RELEVANT

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Impact	Description	Significance
	Negative impacts	
REPUTATIONAL AND ECONOMIC DAMAGE FOR NON-COMPLIANCE WITH RULES AND REGULATIONS (POTENTIAL)	Any behaviour contrary to laws and regulations on environmental, social and governance issues, including business ethics, could have an impact both on the market in which Nippon Gases Italia operates, and on the stakeholders, in relation to its activities. Nippon Gases Italia has implemented an effective Compliance Programme, resulting in a strong and sustainable compliance culture that is well rooted throughout the organisation, with the aim of minimising the risk of any type of violation that could have serious consequences for the company and result in damage to its reputation and high financial penalties.	RELEVANT
IMPACTS ON WORKERS IN TERMS OF DIVERSITY & INCLUSION (POTENTIAL)	Failure to respect diversity and inclusion can lead to discrimination based on factors such as gender, pay inequality, sexual orientation, religion, ethnicity, and language. Nippon Gases Italia is committed to developing and maintaining an inclusive working environment and has therefore implemented specific programmes aimed at contributing to the creation of a sustainable and inclusive culture. These include WING (Women's Ikigai Nippon Gases), which was created to promote an equal presence and rotation of men and women within the company, and EQUALS, which aims to support the LGBTIQ+ community born within Nippon Gases and its supporters.	MODERATE
HUMAN RIGHTS VIOLATIONS ALONG THE SUPPLY CHAIN (POTENTIAL)	Failure to monitor and control its suppliers to promote sustainable sourcing practices could result in the violation of the human rights of workers in the supply chain, with negative social impacts. Nippon Gases Italia controls its procurement process through the supplier qualification and evaluation process. In addition, during the new financial year FYE2024, the implementation of the new purchasing management system at European level will allow the Group to define a common supplier qualification process in all European regions, with the introduction of procedures to assess sustainability aspects more specifically.	MODERATE
DAMAGE TO HEALTH AND SAFETY CAUSED BY NON-COMPLIANCE OF PRODUCTS AND SERVICES (POTENTIAL)	Failure of products and services to conform could result in damage to the health and safety of customers, end users or employees. Every year, Nippon Gases Italia aims to avoid causing accidents, injuries or damage to human health and the environment with the products and activities it carries out, by openly communicating its health, safety, and environmental performance. It also supports education and research on product and process health and safety.	MODERATE
REPUTATIONAL AND ECONOMIC DAMAGE CAUSED BY CORRUPTION (POTENTIAL)	Corruption can lead to misallocation of resources and revenue, environmental damage, and reputational loss. Nippon Gases Italia operates in compliance with current laws and regulations and renews its commitment to corporate ethics, integrity, and social responsibility daily The company condemns corruption, child and forced labour, protects human rights, and promotes fair, transparent, and equitable behaviour.	MODERATE

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Impact	Description	Significance
	Negative impacts	
REPUTATIONAL AND ECONOMIC DAMAGE CAUSED BY INCIDENTS OF ANTI-COMPETITIVE BEHAVIOUR (POTENTIAL)	Nippon Gases UK may be subject to legal action for conduct that restricts free competition, with serious consequences for its reputation. Anti-competitive behaviour can lead to a misallocation of economic resources. Nippon Gases Italia is committed to ensuring fair competition on all levels of production, distribution and sales. The Nippon Gases Italia Group believes that new business opportunities will be obtained exclusively on the basis of products and services offered in compliance with all antitrust rules and regulations in place to ensure fair competition through the rigorous application of the Code of Conduct and the Antitrust and Fair Competition Policy adopted by Nippon Gases Italia on a daily basis.	MODERATE
SOIL POLLUTION (POTENTIAL)	In the event of accidental spills, production activities can have an impact on soil contamination in adjacent outdoor areas. Nippon Gases Italia does not offer the possibility of managing the structured issue, given the low significance of the impact.	NEGLIGIBLE
EFFECTS ON HUMAN AND ANIMAL WELFARE THROUGH NOISE POLLUTION (POTENTIAL)	Production activities can cause noise pollution in the surrounding outdoor areas. Nippon Gases Italia does not offer the possibility of managing the structured issue, given the low significance of the impact.	NEGLIGIBLE
ECOSYSTEM IMPACTS AND BIODIVERSITY LOSS DUE TO THE PRESENCE OF PRODUCTIVE ASSETS (POTENTIAL)	Gas production activities could have an impact on the biodiversity of the area concerned. Nippon Gases Italia does not provide a method for managing the structured topic, due to the low significance of the impact compared to most production sites.	NEGLIGIBLE

The list of **material themes** was derived by aggregating several related impacts and defining a representative theme for each. The **relevant GRI indicators** were then linked to each material topic, also considering the specificity of the Group, as shown in the table below.

The materiality analysis confirmed the material issues identified in previous years. It also highlighted the significance of addressing **climate change, energy consumption**, and the sustainable use of **water resources**, along with prioritising **employee health** and **safety**, skill development, stable labor relations, and supply chain management in line with the Code of Conduct.

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Material Impacts	Material Themes	GRI Indicators
CLIMATE CHANGE CAUSED BY GHG EMISSIONS	GHG emissions and climate change	GRI 305 Emissions
DEPLETION OF WATER RESOURCES	Water resources management	GRI 303 Water and wastewater
CONSUMPTION OF ENERGY RESOURCES	Energy efficiency	GRI 302 Energy
ECOSYSTEM AND HUMAN IMPACTS OF WASTE MANAGEMENT OPTIONS	Waste management	GRI 306 Waste
HUMAN RIGHTS VIOLATIONS ALONG THE SUPPLY CHAIN	Supply Chain Management	GRI 204 Procurement Practices
DEVELOPMENT OF SKILLS OF WORKERS	Employee development	GRI 404 Training and education
CREATION AND CONSOLIDATION OF STABLE EMPLOYMENT	Attracting and retaining employees	GRI 401 Employment GRI 402 Labour and labour relations management
IMPACTS ON WORKERS IN TERMS OF DIVERSITY & INCLUSION	Diversity and inclusion	GRI 405 Diversity and Equal Opportunities GRI 406 Non-discrimination
DAMAGE TO HEALTH AND SAFETY CAUSED BY NON-COMPLIANCE OF PRODUCTS AND SERVICES	Customer and community health and safety	GRI 416 Customer Health and Safety
DAMAGE TO THE HEALTH AND SAFETY OF WORKERS	Workers' health and safety	GRI 403 Occupational health and safety
IMPROVING THE PERFORMANCE OF PRODUCTS, SERVICES AND PROCESSES THROUGH R&D	Innovation, research, and development	N.A.
SHARING VALUE WITH LOCAL COMMUNITIES	Value management and distribution	GRI 201 Economic performance
CREATION AND DISTRIBUTION OF ECONOMIC VALUE IN THE LOCAL AREA		
REPUTATIONAL AND ECONOMIC DAMAGE CAUSED BY NON-COMPLIANCE WITH RULES AND REGULATIONS	Compliance, ethics, and business integrity	GRI 2-27 Compliance with laws and regulations GRI 205 Anti-corruption GRI 206 anti-competitive behaviour
REPUTATIONAL AND ECONOMIC DAMAGE CAUSED BY INCIDENTS OF ANTI-COMPETITIVE BEHAVIOUR		
REPUTATIONAL AND ECONOMIC DAMAGE CAUSED BY CORRUPTION		

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Chapter 2

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Working for more than just the present

For Nippon Gases Group, being much more than just a gas supplier means putting the **customer** at the centre of everything it does.
This approach is expressed in the search for the most innovative technological offers, and the most efficient **supply options**, to the development of customised solutions. The Group operates with a forward-looking vision, consistently striving to create value for its customers and all other stakeholders.

In the following paragraphs, we will outline the activities, initiatives, and safeguards that Nippon Gases employs to create value. We begin with **corporate governance**, highlighting the **high standards of integrity** adopted by the Group, and cover the **management** systems and the **value** the Group creates and distributes to the community. The section will conclude with an overview of the markets served and the diverse solutions Nippon Gases provides to its customers.

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2.1 Our Governance

2.1.1 Corporate governance bodies

Board of Directors

The holding company, Nippon Gases Italia is managed by a **Board of Directors** which is responsible for the management of the company and plays a fundamental role in the governance system. The Board hold the widest powers for the ordinary and extraordinary administration of the Company. As of March 31st, 2024, the **Board of Directors of Nippon Gases Italia** consists of four non-independent members in office until revocation or resignation, and eligible for re-election: a woman over 50 years of age and three men, one of whom is aged between 30 and 50 and two of whom are aged over 50 years.

Its members include the **President**, **Chief Executive Officer**, the **Legal Director and Compliance Champion** of the Italian Group, who also assumes the role of Chief Compliance Officer and European Legal Director, and three representatives of the European parent company **Management**. Internal appointments ensure that the principle of gender balance is respected, with at least one female presence, and shall consider the skills and experience of individual members. They all have twenty years' experience in finance, law, and business.

In FYE2024, **Mr. Raoul Alessandro Giudici (Eng.)** served as Chairman and CEO of Nippon Gases Italia. Additionally, he held executive positions in other group companies, including board member at Home Medicine and Chairman of the Board with authority in the Novigas Consortium. With the beginning of FYE2025, **Ms. Eduina Marino (Eng.)**, formerly the General Manager of Nippon Gases Pharma, was appointed Chairman and CEO of Nippon Gases Italia, succeeding Mr. Giudici. Mr. Giudici will assume the role of Chairman of Nippon Gases Europe starting July 1st, 2025.

The meeting of Nippon Gases Italia shall be convened by the Board of Directors at its registered office or elsewhere within the European Union, the United States of America or Japan. The meeting is convened **at least once a year** within 120 days of the end of the financial year for the approval of the financial statements; in cases permitted by law, the meeting may be convened within one hundred and eighty days. The General Meeting of Shareholders is duly constituted when a majority of the members representing most of the share capital is present and deliberates by a majority of those present.

Supervisory body

The supervisory body consists of a Sole Auditor, and it is responsible for ensuring compliance with law and statues, and compliance with principles of sound administration. In particular, the Sole Auditor supervise the adequacy of the Company's organizational structure for correctness of the internal control system and the accounting and reporting system, correctness the reliability of the organizational structure for accurately representing management operations.

The statutory audit pursuant to **Article 14 of Legislative Decree No. 39/2010** and **articles 2409-bis** and following of the Civil Code, is carried out by the auditing company **EY S.p.A.**, registered in the appropriate Register. Le società controllate Nippon Gases Industrial, Nippon Gases Operations, Nippon Gases Pharma, Nippon Gases Pharma Sud Nippon Gases Refrigerants and Nippon Gases Green Energy are each managed by their own **Board of Directors** consisting of five members. Each Board of Directors is exclusively responsible for the management of the individual company. The control of these companies is also supervised by a Sole Auditor.

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The members of the Board of Directors of Nippon Gases Italia S.r.l. As of 31st March 2024

Raoul Alessandro Giudici
President
CEO and Legal Representative

Eduardo Gil Elejoste
Member of the Board

Justin Miguel Johannes Corcho Maters
Member of the Board

Todd Kuroiwa
Member of the Board

Laura Zanotti
Member of the Board

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The Committees

The committees present in the Nippon Gases Italia group are:

The Management Committee
It meets monthly or at the request of the Chief Executive Officer. Its mandate is to carefully analyse the Group's performance, identify deviations from the assigned objectives and strategic plans, inefficiencies and critical issues that may limit the proper functioning of the business. It is also responsible for defining corrective and improvement actions and setting operational priorities.

Strategic Committee
It meets at the request of the Chief Executive Officer. Its role is to assist the Chief Executive Officer in evaluating strategic projects for all Group companies, where appropriate with the support of the relevant management.

SMART Committee
Its role is to review the processes and tools used in the business to ensure their reliability, reduce the margin of error, or improve the quality and usability of data for all the Group's companies.

Business Committee
It is responsible for analysing sales results and trends, with particular emphasis on volume trends, average price, the effectiveness of market development programmes, new business, and growth opportunities.

Innovation Committee
During FYE2024, one of the results of the Innovation Governance efforts was the creation of an Innovation Committee. This committee was tasked with overseeing, coordinating and approving innovation-related topics and projects.

Streamlining Committee
In FYE2024, a working group was established to gather feedback from the organization on procedures, operational cycles, processes and tools. This group starts an analysis process to evaluate targeted interventions for addressing any defects and inefficiencies, with the goal of finding the most effective solution.

Gender Equality Steering Committee
To ensure continuous and effective adherence to the gender equality management system, as outlined by UNI/PdR 125:2022, Nippon Gases Pharma's management established a Gender Equality Steering Committee in FYE2024. The committee actively promotes a fair working environment by offering additional support to employees who may face challenges related to their identity. This committee works in conjunction with existing compliance measures and all other available reporting tools and channels.

ADVISORY BOARD

In May 2023, the creation of the Advisory Board was officially announced. This new body, introduced on a trial basis within the Nippon Gases Italia Group, will work alongside the Management Committee.

The Advisory Board is an interdisciplinary team of young talents. Its primary role is to offer new perspectives for a better understanding of the Group's challenges and to find sustainable solutions that allow for quick and effective resolution.

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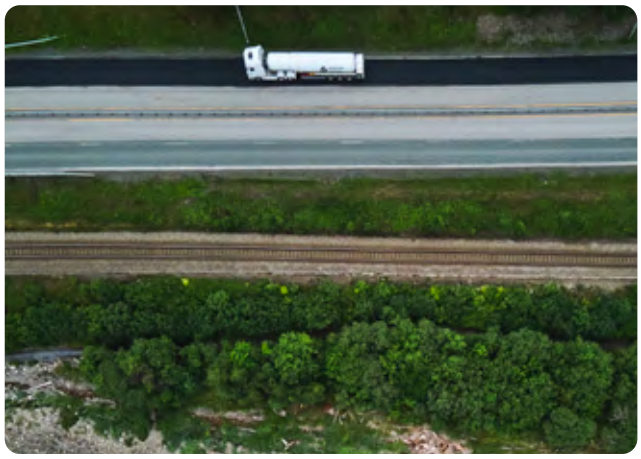
2.1.2 The Sustainability Governance of Nippon Gases Italia

At the European level, Nippon Gases' sustainability performance is analysed a within the **Sustainability Committee of Nippon Gases Euro-Holding** (NGE), which includes 4 members of the Board of Directors of Nippon Gases Italia as at 31st December 2023. This committee defines the sustainability goals that have been formalised in the **Sustainability Midterm Plan FYE2022-FYE2026**. The Sustainability Committee meets quarterly with the European Management.



In addition quarterly meetings are held, co-ordinated by the European management, and attended by all regional CEOs to analyse all the group's results and strategies, including those related to sustainability. Additionally, at the end of each quarter, the **European Employee Teleconference** is held to share relevant performance data across various areas with all employees of the Nippon Gases Group. In particular, updates related to each business area, such as Safety, Compliance, Finance, Cybersecurity and Sustainability.

The **Board of Directors** of Nippon Gases annually assesses the economic, environmental, and social performance of the organisation and the related risks and opportunities. This assessment covers the management of the company's impacts on the economy, environment, and people, and is conducted by the Group's executives.

The evaluation and enhancement processes are necessary to monitor its results and keep performance under control, which is essential to support corporate activities and to achieve strategic objectives.

Nippon Gases has implemented a set of procedures for the management and control of environmental, social and governance issues with the aim of operating in an increasingly responsible and transparent manner and effectively integrating sustainability into its **business model**. At the operational level, a system of proxies and delegations for health, safety and environmental matters is in place for each of the Italian Group's companies, and internal appointments assigning specific responsibilities to employees. In terms of sustainability policy, Nippon Gases defines its commitment and responsibilities by adopting the **policies and procedures defined by its European parent company**.

Specifically:

- NGE Corporate Social Responsibility Policy;
- NGE Environmental Policy;
- NGE Human Rights Policy;
- NGE Information Security Policy
- NGE Intellectual Property Policy;
- NGE Internal Audit Policy;
- NGE Occupational Safety and Health_Industrial Safety and Disaster Prevention Policy;
- NGE Procurement Policy;
- NGE Product Safety and Quality Policy;
- NGE Tax Policy;
- NGE Anti Corruption Policy;
- NGE Antitrust and Fair Competition Policy;
- NGE Social Media Policy;
- NGE Policy on Export Control, Sanctions and Trade Compliance;
- NGE Risk management Policy;
- NGE Personal Data Protection Policy;
- NGE Procedure for the management of personal data breaches.

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Specific procedures are also defined at the **Italian level** the various departments (i.e. Legal, Administration and Finance, HSE and Quality), including:

- Operational protocol for import and management of customs obligations;
- Procedures for participation in public tenders;
- Procedures for managing authorisations, permits and concessions;
- Procedures for managing inspection visits;
- Procedures for managing relations with the Board of Statutory Auditors/Single Auditor and the Independent Auditors;
- gratuities, gifts and sponsorships;
- procedure for identifying and evaluating environmental aspects;
- procedure for managing Information, Training, and Education on health, safety, and environmental protection;
- procedure for managing complaints and related corrective and preventive actions (CAPA);
- procedures related to quality management systems, safety, environment, food safety, and GMP.

Nippon Gases faces with commitment the **social and ethical responsibilities**, as evidenced by the adoption of the Group Code of Conduct and related internal policies and rules. These commitments are officially endorsed by the Board of Directors, emphasising the importance of **compliance** and **ethical guidance** within the company.

Depending on the topic and the type of supporting document (Code of Conduct, Organization, Management and Control Model pursuant to Legislative Decree no. 231/01, Policies), the commitments made through the policies implemented by the Group are communicated in different ways. These include:

- **E-mail** communication to all subsidiaries;
- Publications on the company **intranet**;
- Communication to each **new employee** during onboarding;
- The organisation of specific training on the implementation of the commitments made in the policies;
- The periodic recertification of understanding and acceptance of the **Code of Conduct**, as well as regular training sessions on its principles.

Additionally, the documents are published on the official Nippon Gases Italia **website** and are available for free to third parties.

In relation to the training and development of directors' skills, the European parent company's Sustainability Committee undertakes updating initiatives on sustainability issues and regulatory developments. Additionally, during the quarterly European meetings, attended by all members of the Nippon Gases Board of Directors, updates are provided on company performance and new regulations.

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2.2 Business integrity standards

"The Nippon Gases Group and each employee, manager, and director as individuals strive to be ethical in all business endeavours."
(Excerpt from the Code of Conduct)

The **compliance standards** inspiring the operations of Nippon Gases are:

- all compliance breaches can be prevented;
- compliance is the responsibility of line management;
- every employee is responsible for their own ethical behaviour;
- every employee must stop a job if it cannot be done;
- efforts in compliance yield results in compliance;
- ethical behavior is a condition of employment.

The **Nippon Gases Europe Code of Conduct** is valid for all subsidiaries. It lays out the general principles the Nippon Gases Group follows while doing business. All the activities of Nippon Gases Italia are carried out according to the principles of transparency, correctness and loyalty. The Code of Conduct is directed toward all employees, managers, and directors of the Group, as well as sub-contractors and temporary workers.

Nippon Gases' commitment to high ethical standards and responsible behavior is fundamental to the Group's values. In order to continuously promote a culture of compliance, the Group foresees several initiatives, including the **annual re-certification** of the Code of Conduct. During of this process, employees are asked to confirm that they have read and understood the Code of Conduct and to answer questions about its contents. FYE2024 was the second year in which the recertification of the Code of Conduct was extended to all employees of Group companies, including subsidiaries, with several in-person and online training sessions to reach all recipients. As a result, 100% of Group company employees have completed the recertification process.

In addition to the annual recertification of the Code of Conduct, Nippon Gases' compliance programme includes biannual general training on specific **compliance modules** for most employees, along with additional training sessions tailored to specific needs.

Over the course of the year, six specialised compliance training sessions were conducted, involving a total of **429 participants** across all sessions.

Additionally, every two years, Nippon Gases organizes a **European Compliance Week**, an initiative designed to raise awareness of compliance issues and promote a practical approach to addressing them. This year, from **18th to 22nd March,** 2024, Nippon Gases held its third European Compliance Week. This year's theme was: "Strategies for Promoting and Enhancing Compliance in Third-Party Relations." During the meetings, employees were encouraged to reflect on their compliance practices with colleagues, customers, suppliers, and business partners, reaffirming their commitment to ethical and honest operations. In preparation for Compliance Week, several articles covering topics from the meeting agenda were published on the **WeConnect** platform and made ac-

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cessible to all employees. Compliance Week saw the participation of 560 Nippon Gases employees, with **152 meetings** held-including sessions with external parties-where the topic was thoroughly addressed and discussed.

Nippon Gases promotes the principles of ethical conduct along the entire value chain, requesting customers and suppliers to pay the utmost attention to **professional integrity**. In fact, Nippon Gases Pharma, in July 2023, obtained the anti-corruption certification ISO 37001:2016.

In its relationships with external parties and suppliers, Nippon Gases communicates the principles of the Code of Conduct by sending a letter of integrity and requires its acceptance before starting any type of collaboration. As described in the document, Nippon Gases ensures that commercial and production activities are carried out in accordance with **all the applicable regulations and standards**, establishing relationships based on correct behaviour and transparency with all parties involved.

Nippon Gases is also committed to ensuring **air competition** on all levels of production, distribution and sales. The Group believes that new business opportunities can only be obtained by strictly complying with all existing antitrust rules and regulations. , the Group provides all employees with the **Antitrust and Fair Competition Policy** which contains clear instructions and guidelines aimed at making all employees aware of anti-competitive behaviour and preventing any violations.

In addition to these initiatives, and as a general and precautionary measure, compliance updates were regularly disseminated on the company intranet to raise employee awareness.

The Nippon Gases' strategic choices are based solely on public information and reasonable estimates. Similarly, regarding the **import/export of products**, the Group complies with all current regulations and internal procedures and carries out checks on the profiles of business partners responsible for importing and exporting operations.

Nippon Gases complies with the **General Data Protection Regulation (GDPR)**, EU 2016/679, established by the European Parliament and the Council on 27th April 2016, to ensure the protection of all personal data used in the course of its business activities. Additionally, Nippon Gases Italia implements internal policies and procedures that ensure adequate security measures to prevent the destruction, loss, or damage of the information it holds.

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Nippon Gases has its own **"Organization, Management and Control Model"** (MOGC) , as provided for by Legislative Decree 231/2001 on the administrative liability of legal persons. This model applies in case where crimes are committed by persons in senior-level positions, and by persons subject to their management or supervision, in the interest or for the advantage of the entity. The Nippon Gases Italia **MOGC** identifies:

- the sensitive activities related to these crimes;
- the control criteria in relation to the identified sensitive activities;
- the procedures for managing financial resources to prevent such offences from being ;
- the information reported to and from the Supervisory Board;
- the functions and powers of the Supervisory Board;
- the disciplinary system structure,,
- the modes of communication, and distribution of the Model within the Company and to third parties.

The **Supervisory Board** shall be autonomous, independent, and to have the professionalism and continuity of action necessary to perform its duties efficiently. The Board is responsible for: supervising the functioning and compliance with the Organization, Management and Control Model in order to:

- **make sure** that the conduct within the Company corresponds to the Model;
- **monitoring** the effectiveness of the MOGC by verifying the suitability of the model for preventing the occurrence of crimes;
- **promoting** updates to the Model in order to incorporate the appropriate adjustments resulting from the occurrence of organizational changes in the Company and/or new regulatory requirements.

Nippon Gases Industrial, Nippon Gases Pharma, Nippon Gases Operations, Nippon Gases Refrigerants and Nippon Gases Industrial Sud are also equipped with company-specific Organizational Models that align with the Nippon Gases Italia Model. Each Model is defined on different risks related to specific business activities.

Nippon Gases Italia rigorously follows the standards of ethics and business integrity. Non-compliance by employees can result in strict **disciplinary measures**, including termination of employment in serious cases.

To enhance its commitment to ethics and business integrity, and to comply with the new **Legislative Decree No. 24/2023 (the Whistleblowing Decree 2023), which implements EU Directive 2019/1937** on the protection of individuals who report violations of EU law, the Group has updated and defined the "Nippon Gases Europe Policy on Internal Whistleblowing Reporting System".

In December 2023, Nippon Gases updated its corporate procedures and the Organisation and Control Model to align with the **"Whistleblowing Regulations"**. This included defining the Whistleblowing procedure for Nippon Gases Italia and all its directly or indirectly controlled subsidiaries.

The Whistleblowing procedure establishes an **internal system** that enables employees, as well as third

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parties like independent contractors and suppliers, to report potential violations of the company's code of conduct, EU law and national regulations. Reports can be submitted through the Ethics Point web platform, telephone hotline, email, or in person. Reports can be submitted anonymously, with strict confidentiality for the reporter and a firm non-retaliation policy in place. These reports are managed by a committee led by the **Chief Compliance Officer Europe** and the **Human Resources Director Europe**, ensuring each complaint is thoroughly investigated and addressed.

In addition, the reporting procedures under **SA8000 (Ethical Social Responsibility) certification**, obtained last year by Nippon Gases Pharma, Nippon Gases Pharma Sud and Home Medicine, are in place.

Investigations into compliance and Code of Conduct possible violations are handled by the parent companyby the parent company, Nippon Gases Europe, which has set up a **specific organisation** headed by the Chief Compliance Officer for Europe. Anyone who violates the Code or fails to report a violation of the Code may be subject to disciplinary action.

Thanks to the application of corporate integrity standards, in the last three years in Italy there have been no reports that have led to the detection of violations of the Code of Conduct. Additionally, during FYE2024, Nippon Gases received only one administrative fine, related to incidents from a business unit acquired by Nippon Gases Industrial. In the current financial year there have been no incidents of non-compliance with laws and regulations.

Specifically for FYE2024:

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2.3 Nippon Gases Italia's management systems

Nippon Gases has implemented **Management Systems** certified to the most widely used voluntary international standards. This approach aims to ensure continuous improvement in the areas of **Health** and **Safety**, **Work, Environment, Food Safety and Quality**, enabling to pursue with greater efficiency the following objectives:

- **analyze** and assess risks and opportunities related to Work Health and Safety preventing injuries and occupational diseases guaranteeing the safety of workers, general population, and of the surrounding environment;
- **ensure** compliance with European Regulations and State, regional, and local laws, as well as company provisions in the field of Health and Safety, Environment, Food Safety and Quality; Social Responsibility, Information Security;
- **work** with customers, transporters, suppliers, distributors, and contractors to encourage the safe use of products respecting Safety, Health, and the Environment;
- **limit** the environmental impact of products and services offered;

- **ensure** that personnel are informed of this commitment and are knowingly involved, directly and through their representatives, in the pursuit of the objectives;
- **design** and **operate** plants and facilities in order to ensure their compatibility with the protection of Safety, Health, and the Environment;
- **guarantee** the Quality of products, processes, and the Company in general, in order to meet the expectations and needs of the customers;
- **comply** with the specific requirements of quality, safety, and hygiene for technical pure and special products, food, medicines, medical devices, and refrigerants;
- **ensuring** good working conditions for employees, respecting their rights, and supporting their professional and personal growth;
- **assign** a strategic role to partners, including suppliers and customers, not only in executing operational activities but also in upholding social responsibility and compliance principles;
- thoroughly **assess** the risks associated with the company's activities and provide guidelines for setting up, implementing, maintaining, and continuously enhancing an information security management system, whether digital, paper-based, or physical, while highlighting areas for improvement;
- **implement** a digital strategy with a strong and robust information security program that allows Nippon Gases to adapt and thrive in the digital age while delivering reliable and sustainable service to its customers;
- **monitor** performance indicators and establish goals for the ongoing improvement of Company processes.

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Nippon Gases Italia guarantees a constant commitment to improving its Quality, Health, Safety and Environmental, Anticorruption, Social Responsibility, Gender Equality and Information Security for employees, customers and suppliers.

For this reason, it has obtained and maintained the following **certifications** for its main facilities over the years.

Safety and Environment [1]

- **ISO 45001:2018** Certification
- **ISO 14001:2015** Certification
- **EMAS** Certification

Food Safety and Quality

- **ISO 9001:2015** Certification
- **ISO 22000:2018** Certification
- **FSSC 22000** Certification for the Anagni (FR), Chivasso (TO), Castelnuovo Berardenga (SI), Ferrara, Ravenna, Rapolano Terme (SI) Pontinia, and Verres (AO) sites
- **ISO 13485:2016** Certification
- Declaration of conformity with **Directive 93/42/EC** and the new regulation (EU) 2017/745 for applicable parts, regarding medical devices
- Labelling certification in accordance with **Directive 2014/68/EU (PED)** for pressure equipment
- Labelling certification in accordance with **Directive 2010/35/EU (TPED)** and current **ADR Regulation** for transportable pressure equipment
- **ISO/IEC 17025:2018** accreditation the Chivasso (TO) laboratory
- Kosher certification for the Castelnuovo Berardenga (SI), Rapolano Terme (SI) and Ferrara sites.

Social responsibility

- **SA 8000:2014**[2]Certification

Anticorruption

- **ISO 37001:2016** certification referred to Anti-bribery management systems[3]

Gender equality

- **UNI PdR 125:2022** Gender Equality Certification System[4]

Information security

- **ISO / 27001:2013** Certification

1 *See section 3.3 "Management of environmental issues" for full details.*
2 *The certification was obtained during fiscal year FYE2023 by Nippon Gases Pharma, Nippon Gases Pharma Sud and Home Medicine.*
3 *The certification was obtained during fiscal year FYE2023 by Nippon Gases Pharma.*
4 *The certification was obtained during fiscal year FYE2024 by Nippon Gases Pharma.*

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Maintaining these certifications requires a significant commitment of resources and the performance of **over 170 audits per year**, including both internal and external audits at all Nippon Gases Group sites and functions, as well as audits received from customers and conducted on suppliers. The goal of the Group is to understand its customers' needs and pursue the highest quality standards, adopt best practices to protect the health and safety of workers, guarantee the safety of its products and services, and minimize the environmental impact of its activities.

Moreover, all Nippon Gases CO_2 production plants are **Kosher certified** in order to satisfy more fully the requirements of some important customers. In addition, a **Halal declaration** can be issued due to the characteristics of the production process.

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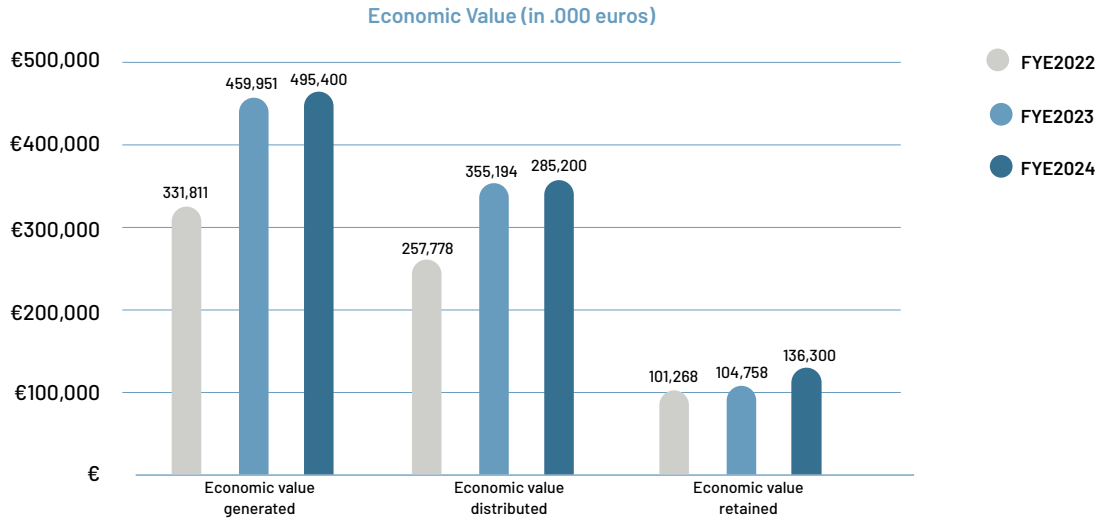
2.4 The value generated by Nippon Gases Italia

In FYE2024, Nippon Gases Italia generated an economic value of **495.4 million euro**, a significant increase compared to the previous year (**+7.7%** compared to approximately 459.9 million euro in FYE2023).

Of the 459.9 million euros generated, **359 million euros** (i.e. **72.4%** of the total) were distributed to the various groups of stakeholders, and the remaining **27.5%** (i.e. 136.3 million euros) was retained by the company.



In more detail, of the 359 million euros of economic value distributed, more than **285.2 million** was allocated to suppliers, mainly in the form of costs for services and raw materials. Approximately **46 million** was distributed to employees in the form of salaries and all other costs related to personnel management. **3 million** euros was disbursed to capital providers through interest and other financial charges. The value distributed to the local community amounts to **567 thousand euros** including donations and membership contributions.

ECONOMIC VALUE DISTRIBUTED (IN '000 OF EUROS)

	FYE2022	FYE2023	FYE2024
Value distributed to suppliers	226,042	302,161	285,200
Value distributed to employees	37,161	40,546	46,000
Value distributed to capital providers	2,318	3,522	3,000
Value distributed to Public Administration	-8,099	8,560	24,062
Value distributed to the local community	356	405	567
Total	**257,778**	**355,194**	**359,000**

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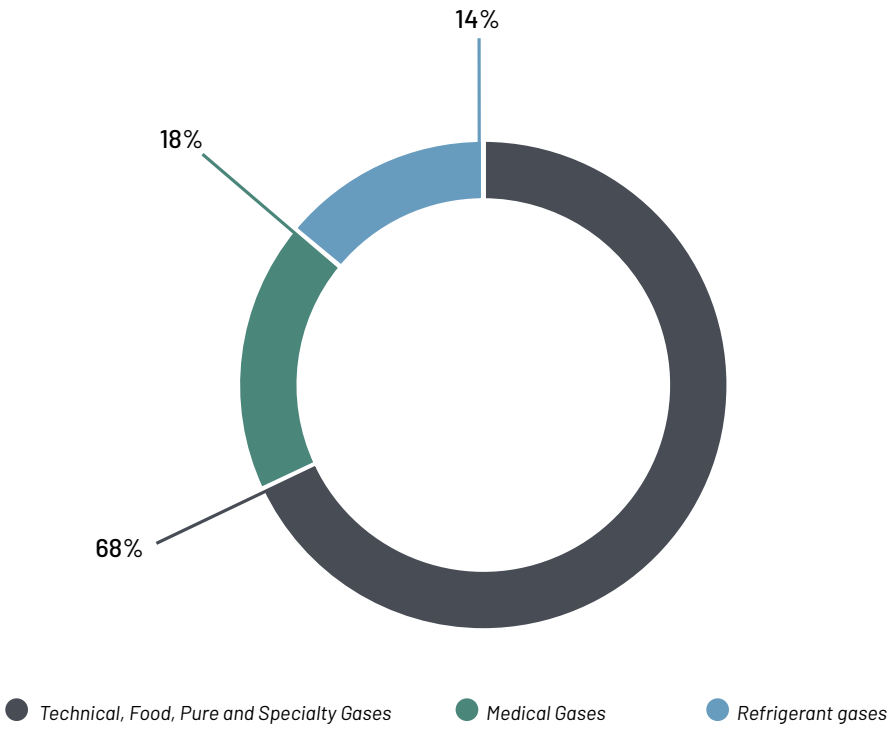
2.5 Markets of Nippon Gases Italia

Nippon Gases Italia operates in the principal industrial and tertiary sectors, offering tailor-made solutions to fully meet its customers' diverse needs.

The **sectors served** by Nippon Gases Group are:

- Manufacturing
- Food and beverage
- Healthcare
- Chemicals
- Chemicals
- Energy
- Environment
- Electronics
- Aerospace
- Other markets



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The Group provides **essential support** to many industries including metallurgy, chemicals, automotive, construction, shipbuilding, environmental and food sectors by offering innovative and tailor-made technological solutions.

For the **food and beverage** industry, Nippon Gases offers a complete range of certified food-grade gases and advanced technologies to improve production processes. The customised solutions provided are aimed at increasing productivity, making production more efficient and improving food quality in compliance with strict food safety regulations. This is accomplished by developing innovative applications and technologies and continuously enhancing Nippon Gases' management systems at the operational level.

Nippon Gases satisfy the most diverse needs of its customers, in complete **respect for the environment**, with a wide range of gas products and mixtures for food use, as additives, adjuvants and ingredients. The latest significant development involves the **Chivasso site**, which, since September 2023, has been certified for producing phytosanitary products. Additionally, since November 2023, it has begun producing **Frutil®**, a nitrogen and ethylene mixture used for fruit ripening, which will be further discussed in the following pages.

Nippon Gases is Italy's leading producer of **Carbon Dioxide** from various sources. This includes Carbon Dioxide of geothermal origin, sourced from natural deposits located in Tuscany, from biogenic origin in collaboration with validated and qualified partners, and Carbon Dioxide of chemical origin, produced in the industrial centre of **Ferrara**. In the chemical and automotive industries, Nippon Gases Italia is constantly striving to offer solutions that improve processes, achieve environmental goals, and reduce production costs for all customers.

Nippon Gases has extensive experience in providing products and equipment for the **heat treatment** industry, including controlled atmosphere generation systems like **Endogreen™**. By leveraging the expertise of Nippon Gases Europe and the support of the Japanese parent company's **Combustion Research Centre**, the Group has solidified its position as a trusted partner in optimising combustion processes.

This applies to the **metallurgical sector** as well as the glass, ceramics, and cement industries, providing solutions that cut energy consumption, production costs, fuel use and carbon dioxide emissions while maintaining product quality. Additionally, the Group has designed and manufactured specialised burners that can use various alternative fuels, including hydrogen and ammonia, to assist customers in transitioning to **green solutions**.

The Nippon Gases' line of **Pure and Specialty gases** finds primary application in instrumental analysis and calibration, scientific research, in high-tech processes, the electronics industry and in chemical-pharmaceutical processes, where certified high purity gases are supplied.

Long-standing expertise, dedicated production lines, accredited analysis laboratories, and complete, versatile supply systems make Nippon Gases Italia one of the leaders in the supply of Pure and Specialty Gases, related materials and distribution systems. Looking ahead, the Group plans to maintain its leadership by strengthening technical and strategic competencies while reducing reliance on external suppliers. In this context, during FYE2024, the Pure and Specialty Gases division launched the **"Make vs Buy Project"** to gradually increase the production of pure gases and calibration mixtures in-house.

At its Chivasso plant, Nippon Gases owns a **Methane** purification plant designed to meet the growing global demand for certified pure product. This plant represent the only source of Methane In Europe, and It is able to continuously produce any degree of purity, up to grade 6.0 (equivalent to a purity of more than 99.9999%). Pure methane is used in various applications, such as testing and validating **CNG** (Compressed Natural Gas) and **LNG** (Liquefied Natural Gas) compressors, as well as in the production of synthetic diamonds. In addition to expanding its pure methane business, Nippon Gases plans to focus on projects for recovering and selling methane by-products, such as ethane, in the coming years.

Over the past two years, the Group has continued to concentrate on the research and development of two essential pure gases: **Hydrogen** and **Helium**. Regarding the Hydrogen, which is a key lever in the transition to carbon-neutral targets, Nippon Gases is investi-

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gating technologies for its production from alternative sources. The goal is a substitute for **fossil fuels** in production processes without releasing CO_2 into the atmosphere.

Helium, on the other hand, is the most strategic and scarce of the speciality gases, and therefore expensive due to limited sources and supply difficulties. The company has established partnerships with specialist in Helium treatment to recover, purify and reuse all gas leaks process by-products. Ongoing research to make **Helium recovery** efficient led to a first test in early 2023, the results of which are currently being analysed. In addition to pure gases (Nitrogen, Argon, Methane, Carbon Dioxide, Hydrogen, and Helium), Nippon Gases supplies also *ad hoc* **calibration mixtures** of high purity gases, produced at customer request. These mixtures meet strict safety and quality standards, using technologically advanced mixing systems.

During FYE2024, Nippon Gases enhanced its focus on the **semiconductor** and **electronics** sector, which experienced substantial growth both in Europe and globally. Throughout the fiscal year, significant investments were made to improve the Specialty Gas offerings for semiconductors. Additional projects are planned for the coming years to support European market growth and better meet customer needs.

Investments include setting up **transfilling stations**, opening new laboratories, and acquiring advanced analytical instruments. New software for efficient sample handling was developed, purification systems were enhanced, and new warehouses were established in key strategic locations across Europe.

In the health sector, **Nippon Gases Pharma** manufactures and markets **medicinal gases** in accordance with the European Pharmacopoeia, which have a Marketing Authorisation (A.I.C.). The high quality ensures maximum efficacy in the therapeutic field and the safety of patients and healthcare workers. In addition to the supply of gases, Nippon Gases Pharma offers a wide range of services and applications for **healthcare facilities** aimed at promoting safer environments and improving the quality of patient care. The services offered include maintenance programmes for medical gas facilities, including periodic inspections, preventive maintenance, service

MINICYL®

To advance recovery and circularity, FYE2024 saw the launch of a project focused on refillable **Minicyl®** cylinders. This project aims to replace disposable products with refillable canisters by recovering, refilling, and reintroducing them to the market. Each cylinder features a **QR code** label for enhanced product identification and traceability, replacing the traditional paper certificate of analysis, which can now be accessed by scanning the QR code.

Retrieving the canisters after use also enables the reuse of the stainless steel valves attached to the canister collars. These valves can be fitted with reducing valves to control the product's pressure and flow rates. Finally, the Minicyl's 70-bar filling pressure, which exceeds the average market pressure, allows for optimal canister filling. This maximises the amount of pure gas and/or mixture per unit sold.

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system audits and facility design, decontamination, training courses and medical gas analysis services. During FYE2024, Nippon Gases Pharma broadened its offerings to include **air sanitisation**. Maintaining indoor air quality is essential for ensuring health in hospitals and preventing the spread of airborne infections.

While pollutants from ventilation systems can be managed with proper maintenance, dust and microorganisms carried by people remain a significant challenge. To address this need, Nippon Gases Pharma has patented a new device: **EiSeiNG**, a highly effective solution for continuous indoor air sanitisation in occupied spaces. This device can eliminate viruses, bacteria, odors, volatile organic compounds, and particulate matter as small as 0.3 µm, marking a significant advancement in creating safer and healthier environments in healthcare facilities.

Through its **Homecare** division, the Group provides patients with the option to undergo **oxygen therapy** at home, offering timely supplies of liquid and gaseous oxygen as well as oxygen concentrators. The Homecare division is also dedicated to providing scheduled maintenance visits for **mechanical ventilation** devices and ensuring regular deliveries of consumables needed for the safe and effective use of this equipment. Homecare's priority is to deliver top-quality services and products, ensuring prompt and continuous technical support for both routine and emergency maintenance.

Nippon Gases Pharma is also at the forefront of advanced telemedicine for integrated home care, using advanced devices and software that allow remote monitoring of vital parameters and medical visits. Through **Home Medicine**, a specialised company of the group,of home care combined with telemedicine services are provided, focused on continuous monitoring of frail patients with complex clinical needs or multiple chronic health conditions. The use of **telemedicine** promotes a better level of interaction between the territory and healthcare facilities, reducing the need for fragile and often elderly patients to travel.

Home Medicine offers a complete healthcare package through advanced technology (APP, web-based platform, digital medical record, remote monitoring of parameters), together with a team of professionals working directly at the patients' **home**. The Home Medicine Operative Centre provides support to the healthcare team (doctors, nurses, physiotherapists, etc.), patients (and their carers) with IT services and telemonitoring kits essential for ensuring effective and personalised care.

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Noxtec Development is the Group's company specialized in development, manufacture and distribution of advanced medical devices for inhaled Nitric Oxide therapy. The **Nitric Oxide** therapy market has grown exponentially, first consolidating in neonatal **intensive care** units, then in paediatric and adult settings, and in the last two years playing a key role in the treatment of Covid-19 patients.

The increasing use of Nitric Oxide, known as a powerful **vasodilator**, is linked not only to its rapid treatment response, but also to its localised action at the cardiopulmonary level, which reduces blood pressure rapidly and avoids interaction with other areas of the human body.

In addition to its inhaled nitric oxide equipment, Noxtec Development is committed to continuous innovation to enhance the quality of its products and medical services provided to healthcare facilities and patients.

The company positions itself as a benchmark in the **medical sector**, relying on a competent, experienced, and specialised team focused on the core values of reliability, quality, safety and sustainability.

Nippon Gases has a long-standing reputation in the refrigerant gas industry, marked by professionalism and expertise.

A long-term partnership with the main producers such as such as **Chemours, Honeywell, Daikin and Arkema**, has allowed the company to develop a deep knowledge of the refrigeration and air conditioning industry.

With over 70 years of experience, Nippon Gases has been at the forefront of providing advanced technological solutions and products with a lower environmental impact.

Thanks to a widespread and broad sales network **Nippon Gases Refrigerants** operate quickly and efficiently throughout Italy, with a complete range of products and solutions in accordance with the latest environmental protection regulations.

Commitment to the sector embraces not only the marketing of new products and the development of new technologies, but also the knowledge and skills necessary for a correct and responsible use of refrigerant gases.

The recovery and regeneration of spent gases play a key role in reducing **HFC** emissions and in promoting the circular economy. Refrigerant gases extracted from refrigeration and air conditioning systems are classified as hazardous special waste **(CER 140601)** and therefore their release into the environment is strictly prohibited.

It is essential that refrigerants are recovered, disposed of or reclaimed by specialized companies according to current legislation.

This strategy not only ensures compliance with environmental regulations but also fosters **sustainable practices** in the refrigeration and air conditioning sector, further solidifying Nippon Gases' leadership in the refrigerant gas market.

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EcoStar™ by Nippon Gases Refrigerants is a service designed for the management and recovery of refrigerant gases at the end of their life. This service, which offers simplicity, speed, and cost benefits, ensures accurate and compliant management.

All regeneration, treatment, and disposal of spent refrigerant gases is carried out at the authorised Nippon Gases Refrigerants facility. The EcoStar™ service, provides complete assistance for the recovery and treatment of refrigerant gases and includes:

- **provision** of legally labelled packaging;
- **collection** and **transport** of the waste with an authorised transporter
- **chemical analysis** for waste characterisation
- **Reclamation** of packaging (also owned);
- **regeneration** of exhaust gases
- thermo-conversion of non-regenerable waste

During FYE2024, Nippon Gases Refrigerants introduced an innovative subscription service that provides a sustainable and cost-effective solution for managing recovered gases: **easyEcoStar™**.

Customers who join the programme can send their gases for purification, ensuring that, once treated, they can be reused safely and efficiently.

For customers opting to repurchase remanufactured gas, **Nippon Gases Refrigerants** offers a lower repurchase price than the standard market rate, providing both economic benefits and support for sustainable environmental practices.

If customers choose not to repurchase the regenerated gas, the company provides compensation as a recognition of their contribution to circularity and waste reduction.

Once regenerated, refrigerant gases retain the same chemical composition and performance as virgin gases, with a **Global Warming Potential** (GWP) of zero. Additionally, remanufactured gases comply with **AHRI 700** standard specifications, guaranteeing high quality and sustainability.

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2.6 Solutions offered by Nippon Gases Italia

2.6.1 Technological applications of cryogenic gases

Nippon Gases offers its customers innovative and cutting-edge technologies to improve the sustainability of their production activities. In the field of material production and processing, an interesting example is **Endogreen™**, an **Endogas** generator consisting of a mixture of 40% Hydrogen, 20% Carbon Monoxide and 40% Nitrogen.

This device uses an innovative noble metal oxides based catalyst of patented composition, not labelled with risk phrase R49. Through a catalytic endothermic reaction, Endogreen™ produces a gaseous mixture suitable for a wide range of **heat treatments**, including case hardening, carbonitriding, tempering, sintering and all treatments requiring a controlled carbon potential.

Thanks to its patented modular design, Endogreen™ adapts to the needs of the production department, adjusting its flow rate and thus reducing waste and unnecessary emissions. It does not use **cooling water**, but a high efficiency air-to-air heat exchanger with a dual heat recovery system. This system generates a virtuous circle that reduces Methane consumption and emissions once fully operational.

The number of new systems installed continues to grow thanks to extremely positive references from major industry players, increasing by **20%** in FYE2024,

In the steel and metallurgical industries, **oxycombustion**—using oxygen and specially developed burners in metal smelting—offers several advantages over traditional combustion, including:

- optimised and controlled heat transfer;
- reduced specific fuel consumption;
- reduced carbon dioxide emissions;
- a higher melting rate;
- increased productivity;
- reduced slag formation.

This system ensures significant reductions in pollutant emissions, with up to 50% less **CO_2** and up to 80% less **thermal NOx** and combustion fumes. The numerous advantages translate into a considerable reduction in investment in new equipment and related installation and maintenance costs. Nippon Gases has developed, manufactured, and installed various burners for **oxycombustion** technology, tailored for metal and non-ferrous melting processes as well as glass and ceramic materials. This expertise positions Nippon Gases as a dependable and trusted partner in these applications. One of the main solutions is the **DiluJet® JL** burner, primarily used in aluminium processes.

This burner has been designed not only to to cut down NOx emissions but also to ensure a high coverage of the bath surface, to foster the **circular economy of aluminium**. Recovered aluminium has a high organic content, the calorific value of which and can be exploited, thus reducing the consumption of natural gas for heating, This approach reduces **carbon monoxide** emissions in the stack and helps meet regulatory limits on pollutant emissions. Additionally, optimising the combustion process reduces carbon dioxide emissions, marking a step toward decarbonisation.

The presence of Nippon Gases in the sector is gaining momentum due to the increasing focus of secondary smelters on environmental sustainability, which also brings significant advantages in terms of production and operational flexibility. For smaller plants, Nippon

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Gases designed the **SansoJet® CM** burner, conceived to have a mobile flame over the entire surface of the bath and obtain production increments while at the same time avoid hot spots. The burner is mounted in the furnace roof, requires no water cooling, and enables energy to be released only when and where needed.

In addition, thanks to the technological support of Nippon Gases Europe, Nippon Gases Italia can offer its innovative **SansoScan®** technology to customers using rotary kilns. This technology makes it possible to modulate the Oxygen supply by means of real-time colorimetric analysis of the flame, thus guaranteeing effective combustion control. This improves production efficiency, reducing energy losses and limiting CO emissions in the chimney.

During FYE2024, the **DevH2EAF** project (Developing and Enabling H_2 Burner Utilization for Liquid Steel Production in EAFs), funded by the **European Union Coal and Steel Research Fund**, was launched. This initiative aims to innovate liquid steel production in electric arc furnaces (EAFs) through the development of hydrogen burners. Led by **RINA-CSM**, the project includes industrial partners such as **Nippon Gases Industrial, SMS Group, Ferriere Nord, Celsa (Barcelona), and AFV Acciaierie Beltrame**. It also features key collaborations with universities and research centers, including **RWTH Aachen University**.

The initiative includes designing new burners, conducting a preliminary risk analysis for using hydrogen in electric arc furnaces, and monitoring the performance of these H_2 burners. Special attention is given to how varying hydrogen enrichment levels, up to 100% H_2, affect the quality of the finished product. The project, involving laboratory tests at the **RINA-CSM** Research Centre in Dalmine and industrial trials at Ferriere Nord (Pittini Group) and Celsa in Barcelona, aims to replace methane and other fossil fuels, enhancing the environmental sustainability of steel production and advancing decarbonisation efforts. Nippon Gases Italia plays a crucial role, providing expertise in the safe management of hydrogen gas, supplying the necessary gases for testing (particularly H_2), and designing and building the **Fuel Supply Regulation System (FSRS)**. This system regulates and controls the supply of fuels, allowing for blends ranging from 100% natural gas to 100% hydrogen. For the development of the **FSRS**, Nippon Gases has employed advanced safety and control strategies to ensure its secure operation both at the research center and in the partner plants.

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In the **combustion sector**, including steel, aluminum, glass, and cement, Nippon Gases reaffirms its commitment to innovation and environmental protection by developing projects aimed at controlling emissions, reducing waste, boosting production and lowering operating costs.

At the end of FYE2024, Nippon Gases, together with a consortium of Italian and European companies and research institutes, secured a European grant from the **Clean Hydrogen Partnership**. The **Horizon** project, named **H2AL**, aims to test hydrogen as an alternative fuel and assess its impact on the quality of the end product in the aluminum sector, specifically in "tower" melting furnaces. Nippon Gases will supply the combustion technology and the gases needed for its operation, including cryogenic liquid oxygen and compressed hydrogen.

Nippon Gases is responsible for designing and manufacturing burners that can use up to 100% hydrogen. Additionally, the company will develop a regulation and control system for feeding **fuel gases** (natural gas and hydrogen in various blends) and the combustion agent (Oxygen).

In addition to testing at project partner research centres **(Fraunhofer, Tecnalia, GHI, GWI)**, continuous validation will be conducted in an industrial furnace at the 2A foundry, where Nippon Gases will provide the necessary gases (H_2 and O_2). This commercial-scale test will assess the reliability of Nippon Gases' burners and examine the impact of various hydrogen/natural gas mixtures and associated combustion gases on the end product and emissions, particularly aiming to reduce **CO_2 emissions**.

The project is spearheaded by the **University of Brussels (ULB)**. Nippon Gases will leverage the expertise of its Japanese parent company in oxyfuel applications through the Yamanashi Technology Solution Centre.

For the **glass industry**, Nippon Gases Italia offers manufacturers the **O.E.N.R.** (Oxygen Enhanced NOx Reduction) technology which allows a significant reduction in NOx emissions, subject to increasingly stringent regulations. Using a staged combustion approach, the technology can be implemented without major structural changes to the kiln with the addition of Oxygen lances, providing immediate benefits to both the environment and the economics of the process.

Nippon Gases Italia supports its customers with the treatment of effluent waters. The **MIZU-O_3®**, ozonolysis technology supplied by the Groip makes it possible to minimise the problem of disposal of the sludge arising from biological processes, inevitably produced in the water treatment. The quantity of **ozone** is adjusted in a controlled manner over a fraction of the flow of sludge that is recirculated from the secondary settlement tanks to the inlet of the water treatment plant.

Thanks to the high oxidising power of the Ozone, bacterial cells undergo a combined hydrolysis and mineralisation process. Nippon Gases has patented a special **contact system** that maximise the effect of its Ozone by increasing the reduction of sludge and consequently the environmental impact of purification processes. This reliable technology is the subject of continued interest for safe and economical sludge disposal.

Nippon Gases provides a range of innovative solutions designed to enhance the sustainability and efficiency of industrial processes. One of these is the use of **Carbon Dioxide** to control and neutralise the pH of aqueous solutions. CO_2 is a safe and eco-friendly alternative to strong mineral acids traditionally used in neutralisation processes, avoiding the risks and difficulties associated with the management of highly hazardous substances. This approach avoids the use of chemicals that are harmful to the environment and that pollute surface waters.

When it comes to the recovery of **Volatile Organic Compounds** (VOC), Nippon Gases Italia supplies a wide range of systems and applications, enabling its customers to comply with the applicable regulations, optimise consumption and reduce greenhouse gas emissions throughout the production chain. The solutions offered make use of the most advanced techniques for abatement and recovery of solvents, widely used in chemical and pharmaceutical processes. Instead of burning, which produces CO_2 emissions and Methane consumption, the recovery systems offered by Nippon Gases, fully regenerate the solvents making them reusable and optimising their life cycle.

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Nippon Gases also provides customers with access to a network of specialists throughout Italy. This network of specialists assesses the specific needs of each industrial customer and proposes the best solutions to increase productivity and significantly reduce rework. Through the implementation of advanced technologies the company strives to make its customers' processes more sustainable, reducing environmental impact and CO_2 emissions..

The **Bulk Distribution Department** is responsible for managing, scheduling and monitoring the distribution of liquid cryogenic products, and supervising the maintenance of means of transport in order to guarantee the safety of delivery operations and to ensure the best possible service to customers Among the main indicators monitored by the Bulk Distribution Department, **kg/km** indicates how many kilos of product are transported for each kilometer traveled. The greater the value of the indicator, the more efficient the transport is, with a greater quantity of product being distributed for the same number of kilometers traveled.

In FYE2024, the volumes of products distributed increased compared to the previous financial year. This increase, despite the number of kilometres traveled remaining stable, reflects an efficiency value of **38.7 kg/km**. In the case of CO_2 distribution, performance improved from the previous year, primarily due to the increased volume of CO_2 produced at the Yara Ferrara plant. In pursuing a strategy of continuous improvement, Bulk Distribution has promoted numerous initiatives in different areas that have contributed to maintaining an almost constant kg/km value.

In order to optimise logistics from a technological infrastructure point of view, the **OIR (Ortec Inventory Routing)**project, a software for the planning of deliveries, was further developed with the aim of reducing the actual kilometres travelled annually. During FYE2024, the **Bulk Distribution** function integrated all products, including Nitrogen, Argon, Oxygen, and CO_2, into the logistics system.

Once the order list and product availability are determined, the software optimises the delivery routes. The software consists of two modules:

- proactive order generation thanks to special telemetry systems installed in the tanks at customer sites. These systems monitor the CO_2 level over time and propose delivery times, respecting the constraints of a customer's plant operating hours;
- optimising travel planning.

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Simultaneously, new IT interfaces were developed to enhance the software's interoperability with other applications.

As part of the digitisation initiative, the OIR system was upgraded to automatically email compliance declarations immediately after delivery.

Expanding the capacity of existing production sites was another crucial factor in optimising logistics performance and broadening the product offering. A notable example is the **ASU production site in Pontina**, which was initially dedicated to producing industrial gases.

In FYE2024, after passing the AIFA authorisation audit, the plant can produce medical gases right next to customers. This led to a significant boost in distribution efficiency, saving 45,000 kilometres of travel.

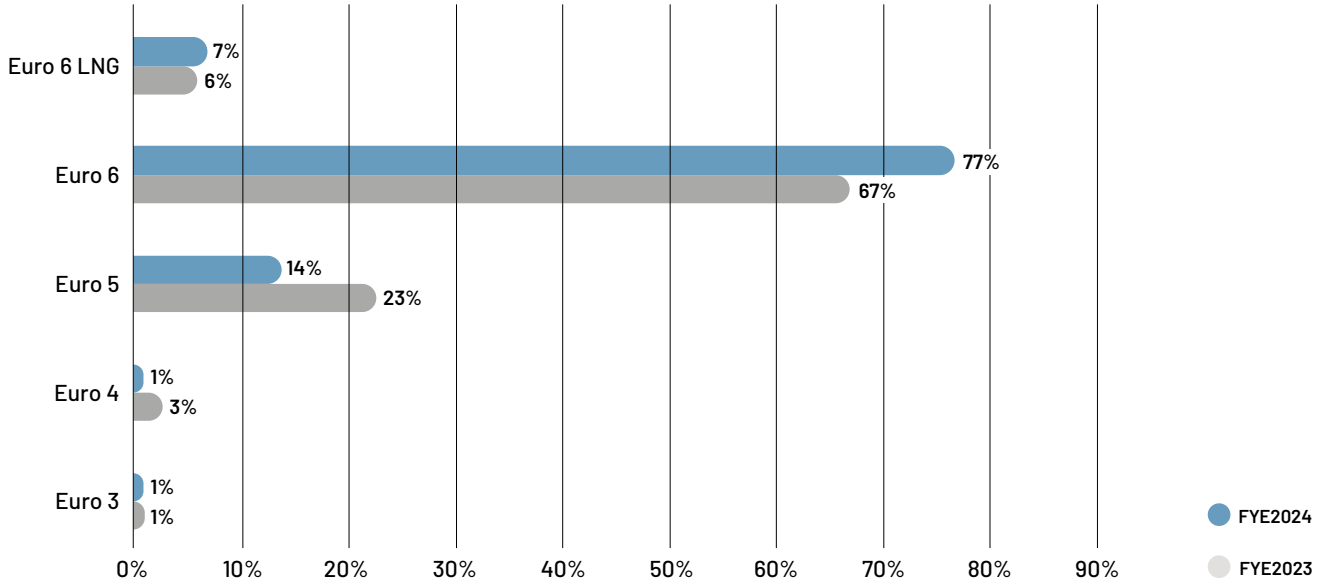
The **Tank Resizing**, project continued, to increasie the size of the tanks installed at the most logistically critical customers This made it possible to reduce the number of annual deliveries and consequently supply travels. Throughout the year, 30 **tanks** of Nitrogen, CO_2, and Argon were replaced.

Additionally, during the fiscal year, the **Microbulk** tank range was expanded to include a new 5,000-litre size, aimed at optimizing product deliveries and reducing the number of trips needed. The first installations of these new tanks are scheduled for 2024. In conjunction with distribution and based on customer usage, opportunities for further transport optimisation are assessed, including adjustments to storage methods and tank sizes as needed.

In order to minimise the impact of product transport and thus simplify logistical procedures, Nippon Gases proposed the introduction of on-site **Nitrogen production facilities** at customer sites requiring large volumes and 24/7 product continuity assurance. There is a significant increase of 12% in the number of on-site systems installed at customers compared to FYE2023.

Nippon Gases is also expanding its range of **onsite** gas production solutions for smaller capacity plants.

Finally, it's crucial to note that transportation impact is closely related to the type of vehicles utilised. The Group continued to upgrade its bulk distribution fleet; 98% is made up of Euro5, Euro6 or Euro6 LNG vehicles.



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2.6.2 Technological applications of compressed gases

Nippon Gases provides a wide array of innovative solutions for customers using compressed gases in cylinders and cylinder packs. In the welding sector, it offers products from the **Sanarc®**. line by carefully analysing customer processes. In addition to a range of standard products, the line includes gases and blends that improve performance in terms of process quality and productivity, reducing arc ignition time by an average of 10%. Using the Sanarc® gases in welding processes, reworking is reduced by up to 15%, which effectively cuts down energy consumption at customer sites.

A concrete example is Sanarc® HP5, a **ternary blend** of Argon, Helium, and Hydrogen, which has been shown to reduce electricity consumption by 30% compared to competing solutions, as confirmed by a case study presented at the National Welding Days. This is proof of the complete technological support that Nippon Gases offers, which is not limited to the supply of gas.

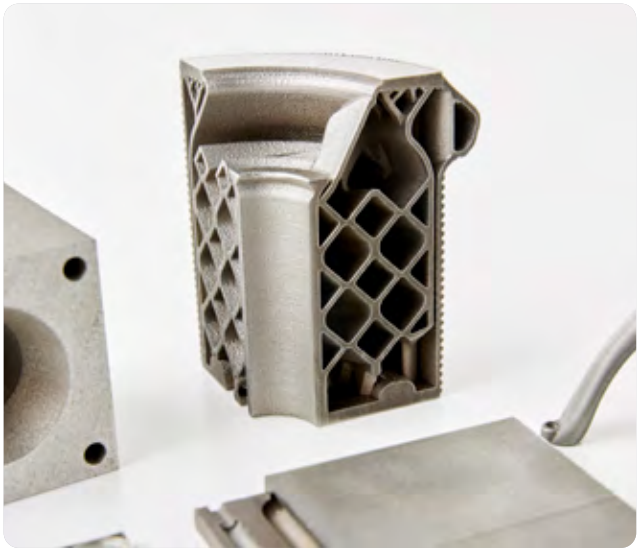
An example in the field of braze welding is the **SanCut®** process. This process combines a **combustible gas** (Acetylene or Propane) with a **comburent gas** (Oxygen), producing a controlled high temperature flame that can melt a metal alloy. By using SanCut® and a specific additive that works as a combustion catalyst, it's possible to improve combustion efficiency, increase the temperature of the flame reducing, by up to 6%, processing time and comburent gas consumption. Customers who choose this solution reduce their environmental impact by reducing emissions and energy consumption.

In the laser cutting sector, Nippon Gases offers the **Lasersan®** line, providing high-purity gases essential for achieving high-quality cuts, minimizing waste, and reducing the need for rework.

Nippon Gases excels in industrial automation, delivering advanced solutions that boost productivity, enhance safety, and lower costs in competitive, fast-paced industrial settings. Through strategic partnerships with industry leaders, the company specialises in designing and implementing customised process lines that streamline and optimise production operations across various applications.

In collaboration with industry-leading partners, Nippon Gases delivers cutting-edge technology in **automation and robotics** for both production and intralogistics. These solutions are tailored to meet the specific needs of companies across all industries, ensuring high performance and reliability.

Nippon Gases excels not only in equipment supply but also in comprehensive consultancy services through the **NGI Hub**, catering to both the food and manufacturing sectors. From process evaluation and technical advice to detailed planning and implementation, the Group is dedicated to tailoring its solutions to ensure maximum customer satisfaction. In the field of **Additive Manufacturing**, Nippon Gases not only supplies the required gases but is also developing advanced technologies to enhance metal 3D printing by reducing oxygen and moisture levels, ensuring superior mechanical properties and quality in printed products.



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NGI HUB

NGI Hub sets the standard in the Metal Fabrication and Food & Beverage sectors for providing comprehensive and easily implemented solutions.

The integrated and innovative service relies on highly interconnected pillars.

In the **Metal Fabrication sector**, Nippon Gases Italia partners with ACCREDIA-certified organisations under ISO/IEC 17024 and 17065, serving as the central hub for services, training, certification, and testing in line with the latest international standards.

- **Training**: a range of courses including welding practice, welding coordinator qualifications, welding techniques for designers, welding defectology, and customised training;
- **inspections:** quality checks, inspections of metal products according to EN 10204, production verification, and work progress assessments;
- **supplier Certification:** conducts systematic control, monitoring, and customized audits;;
- **testing:** offers destructive and non-destructive analysis, dimensional testing, X-ray tomography and inspection, and failure analysis;
- **working Islands:** testing welding generators to CEI EN 50504, CEI EN IEC 60974-14, and UNI EN ISO 17662 standards, and creating visual operating instructions.;
- **total quality:** implements statistical process control (SPC);
- **drafting of documents**: welding manuals, validation of WPS and production maps, control plans, technical specifications, and WPQR procedure qualifications.

Instead, in the **food sector**:

- **quality**: shelf life assessment, identification and monitoring of quality markers, pilot plant testing, and regulatory compliance;
- **innovation and Training**: product and process development and updates, consumer perception studies, and staff training programmes;
- **testing**: chemical, physical, microbiological, and sensory analysis, packaging-food conformity testing, market assessments, customized projects, and consultancy;
- **food safety**: assessment of physical, chemical, and microbiological risks, development and revision of HACCP plans, validation of process plants, and environmental impact studies.

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In the Food & Beverage sector, Nippon Gases is actively developing solutions to extend product shelf life using advanced **Modified or Protective Atmosphere** (MAP) packaging technologies. The Group's extensive experience is crucial in providing gases and mixtures that serve various functions, such as preventing oxidation and bacterial growth. This includes removing oxygen from packages, replacing air with nitrogen, or using specific mixtures of nitrogen, argon, and carbon dioxide tailored to the type of food.

When packaging fresh meat, instead, it is necessary to retain a high percentage of **Oxygen**, whose effect on haemoglobin, contributes to maintain the vivid red colour of the meat. This technology aims to postpone the chemical, enzymatic and microbiological processes associated with the degradation of fresh product.

Nippon Gases actively collaborated with the **University of Salerno** on studies to evaluate gas mixtures for the MAP fish packaging market. The aim the extension of the shelf life of the products, which currently varies from 6 to 10 days. The project involves setting up a specialised food packaging and analysis laboratory that will provide testing services to determine the optimal **shelf life** in a modified atmosphere.

Specifically, Nippon Gases Italia provided a packaging machine to the University of Salerno for conducting post-packaging **laboratory tests** to validate best practices. In FYE2024, trials were conducted on products like basil and tuna to determine the optimal shelf life in line with market demands and trends. This approach will enable manufacturers to implement modified atmosphere production strategies, reducing waste compared to traditional methods that often have shorter shelf lives.

In recent years, Nippon Gases has partnered with private research foundations and **compostable film** companies to integrate MAP packaging technologies with sustainable packaging solutions. This collaboration ensures extended shelf life for products while preserving their organoleptic qualities.

Relying on its extensive experience in modified atmosphere packaging, Nippon Gases has developed its **FOODSENSE®** gas line, which can satisfy the most demanding food packaging requirements.
These gases and gas mixtures are designed to optimise food preservation, maintaining organoleptic qualities and significantly reducing waste and spoilage.

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With its FOODSENSE® line Nippon Gases , besides a **full range of gases for use in packaging**, offers a complete service in keeping with the needs of a constantly evolving sector:

- proposing the most suitable gas mixtures for each food;
- conducting tests at customer sites to fine-tune the packaging processes;
- verifying the results obtained by means of specific testing equipment;
- supplying systems and materials for a correct use of gases.

This integrated approach allows Nippon Gases' customers to adopt advanced packaging solutions, enhancing operational efficiency and ensuring the highest quality and safety of packaged food.

In the pursuit of technological innovations to enhance food quality and safety, Nippon Gases launched the **LEAK DETECTION** project in FYE2024, developed in collaboration with a corporate partner. This initiative provides customers with an advanced solution for detecting gas leaks in sealed food trays, ensuring that the initial gas levels are maintained. This is crucial for preserving the **durability and freshness of food** until it reaches the end consumer.

The leak detection process occurs in real time during the production phase, directly within the packaging line. The leak detection machine is the outcome of a collaboration with a partner specialising in the production and supply of this **technology** This innovation allows for immediate detection of any anomalies, preventing defective products from moving along the distribution chain.

Nippon Gases' **LEAK DETECTION** project aims to precisely identify leaking trays and packages, ensuring customers benefit from extended product shelf life and contributing to a reduced environmental impact by generating less waste compared to standard methods. This system meets essential food quality and safety requirements, streamlining processes and lowering the total cost of ownership compared to integrated systems.

The primary market sectors for this technology include fresh pasta, cold cuts, cheese, ready-to-eat salads, red meat, and poultry. The new **LEAK DETECTION** system represents a cutting-edge solution for optimising production and significantly reducing environmental impact while upholding high standards of quality and food safety.

Another example of sustainable technology is the carbonation of water, which Nippon Gases offers through **HappyDrink®**, a service dedicated to the companies operating in the restaurant and catering sector. This involves the onsite installation of an extremely compact stainless-steel container that ensures a constant, uninterrupted supply of **Food-grade CO_2**. This supply modality ensures extremely high efficiency levels in terms of product quality, flexibility, delivery times to the utilisation site and reduction in kilometres travelled,

Furthermore, the service helps to reduce the consumption of plastic bottles, thereby saving the energy required for their disposal or recycling. ippon Gases also manages the supply of gas to **water fountains** in the municipal stations mainly in central Italy (specifically Rome, Florence, Perugia, and Terni), guaranteeing access to an essential commodity, and also helping to reduce the use of bottled water by consumers.

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In FYE202e, enough **CO_2** was delivered to gasify nearly 40 million 1.5l bottles of water, theoretically saving 1,200 tonnes of plastic.

To optimise and enhance the operation of the **Happy-Drink®** service, the Group plans to acquire a new tank, which will be operational starting in early 2025.

To meet the growing needs and evolving production processes of its customers, Nippon Gases offers for customers who have reached a significant consumption volume, includes the convertion from compressed to liquefied gas supply through the installation of a **cryogenic container** permanently installed at the customer's site, designed according to the specific requirements. Once installed, the container is filled periodically with a cryogenic liquid product.

With this supply mode, the customers that use great quantities of gas can reduce the number of deliveries and the ensuing environmental impact.

The **Package Distribution** team organizes and manages the distribution and transport service for all the compressed gases, including technical, pure and specialty gases, food, medical and refrigerant gases. It collects customer orders and collaborates with the production departments to ensure a timely and effective service by optimizing the distribution process. During FYE2024, the Package Distribution fleet expanded significantly, with a marked increase in patients in the **Homecare** sector.

To monitor the distribution process, the Package Distribution team the main indicator used is **km/cyl**, which indicates how many equivalent cylinders are transported per kilometre driven. The lower the value of the indicator, the more efficient the transport, as a greater quantity of cylinders is distributed for the same number of kilometres travelled.

Considering both primary and secondary transport and excluding Homecare deliveries, the km/bb indicator decreased by **3%** compared to the previous fiscal year. This reduction is due to a **4%** decrease in kilometers traveled, while the total number of cylinders transported remained largely unchanged.

For Homecare supply alone, the km/bb indicator decreased by **13%** compared to the previous fiscal year. This decrease resulted from a **27%** increase in kilometers traveled, which was offset by a 46% rise in the number of cylinders transported.

In FYE2024, Nippon Gases achieved its goals thanks to the revision of the logistics structure and the implementation of several operational activities:

- **fleet replacement strategies**: the company replaced approximately 10 vehicles with Euro 6 models, enhancing efficiency and reducing environmental impact;
- **optimisation of trip and route planning:** route planning was refined to boost efficiency and reduce kilometres travelled;
- **increased truck utilisation**: by enhancing truck utilisation, the company better met market demands and improved distribution performance.

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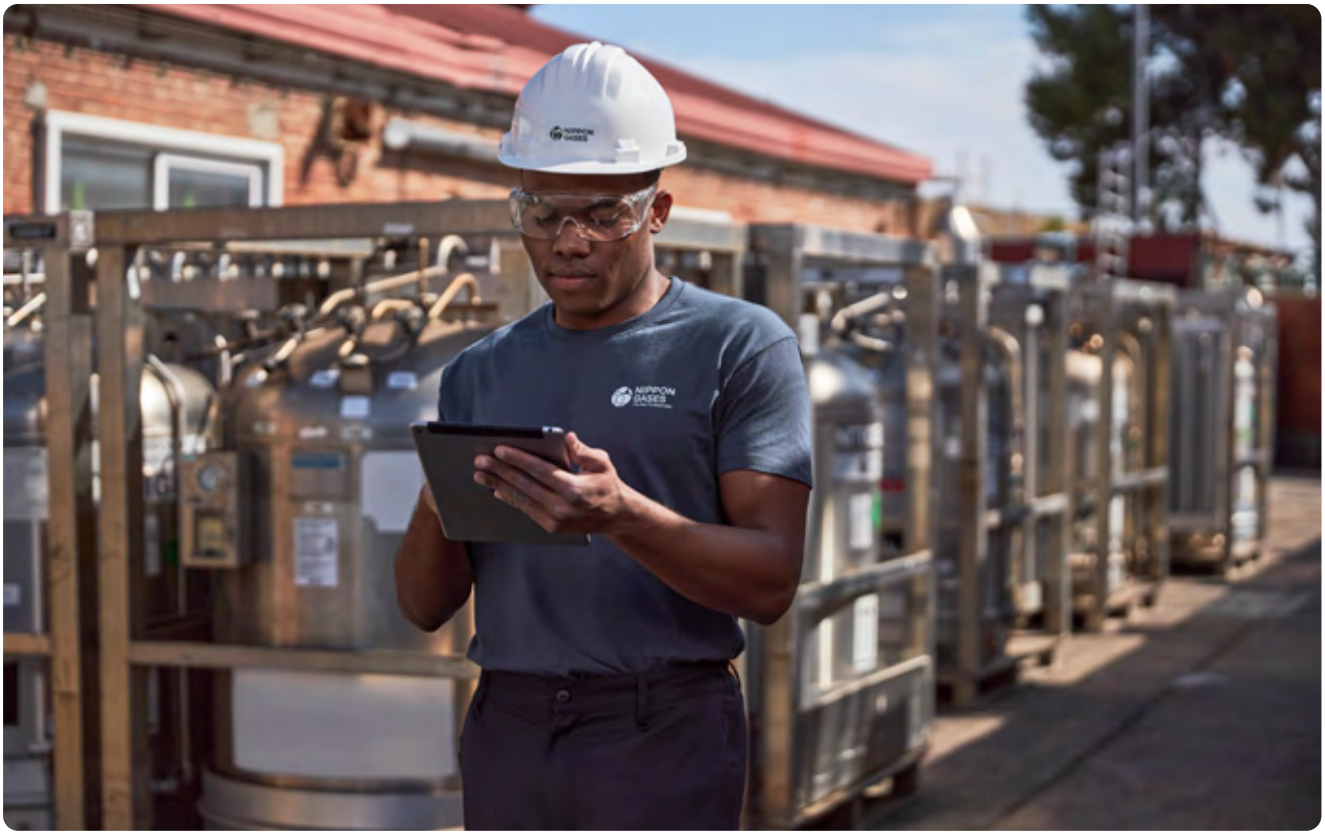

Additionally, Package Distribution reorganised the planning team by implementing a strategic **job rotation** and reassessing workloads.

A health and safety innovation introduced in 2023 was the acquisition and installation of the **Mix Telematics** system on the Package and Homecare fleet vehicles. This system monitors various parameters, including driving patterns, speeding, and lane changes. Additionally, it provides:

- ensured cargo **safety** during transport, adhering to ADR regulations;
- **performance** monitoring of drivers;
- dynamic **analysis** capabilities for accident scenarios.

These innovations have enhanced the safety of both personnel and cargo, leading to more efficient and secure transport operations.

Cylinders are one of the company's most important assets. To make efficient use of them, Nippon Gases constantly monitors the rotation rate of the containers and plans a strategic distribution of them among the production and distribution centres is planned to ensure continuity of supply to all the customers.

In recent years, the distribution logistics for some products, such as liquid helium, have been reorganised by using small mobile tanks to fill the **Dewar** containers at the customer's site This solution optimised transport and transfer operations, boosting overall efficiency.

A key initiative in FYE2024 is the digitisation of Package Distribution delivery notes through the **WeTrack** platform. In 2023, the **PAPERLESS** project was launched to digitize the transmission of **Transport Documents (DTDs)**. Throughout 2024, some Nippon Gases plants will begin emailing TDs to customers and distribution centers. This change will streamline the request process, boost productivity, cut paper use, and save time by fully digitising the process.

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2.7 Installation and technical service at customer sites

Nippon Gases' Customer Service team serves both the industrial and medical sectors, offering comprehensive support across Italy. The main objectives of **Customer Service** are:

- to design and install **gas storage and distribution systems** at customer sites;
- to improve the efficiency of the installed systems ensuring their maximum operational **efficiency**;
- the **preventive maintenance** of installations to guarantee continuous and reliable operation.

All these activities are performed with a continual focus on the health and safety of workers, suppliers, and customers.

The number of interventions carried out directly by the Nippon Gases by qualified technical assistance companies during FYE2024 remained stable, even though the number of patients treated at home increased by **60%.**

On the other hand, the number of **Nippon Gases Industrial** interventions increased due to the Technical Care project. This initiative includes extraordinary maintenance and adjustments to customer installations, supported by proactive technical assistance and the **Sales Hub** service.

One of the main activities carried out by f Nippon Gases **Customer Service** is tank revamping, i.e.the refurbishment and modernisation of potentially obsolete equipment, making it functional again. This activity, carried out in-house offers customers maximum flexibility and allows them to extend the useful life of their equipment. Nippon Gases' goal is to service at least one-third of the equipment annually to extend the average life of the tanks and rationalise the **movements** of maintenance personnel.

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In the medical sector, Nippon Gases supports customers, mainly hospitals, in the maintenance of endocavitary suction pumps that require oil lubrication. Starting in FYE2024, the Group began using synthetic oil instead of mineral oil. As a registered **Hazardous Waste Transporter**, Nippon Gases independently manages the recovery and disposal of used oil. Additionally, in 2023, Pescara and Turin were added to the National Register of Environmental Managers to enhance waste management at their plants.

Customer Service manages all interventions through a computer system that collects and analyse data on each intervention, to optimise the services, reducing the number of interventions and the number of kilometres travelled. Regular monitoring of incidents and **near misses** guarantees the highest levels of safety for its employees, suppliers and customers.

In FYE2024, the Group continued its project to **digitise the site register**. This project aims to digitise documentation that is still managed on paper or in a hybrid format, tracking key operations during the installation of medical gas distribution systems. In FYE2024, the Group successfully digitised approximately 90 percent of the forms sent to customers, boosting efficiency and reducing paper usage.

A valuable project that has been strengthened over the past two years is the efficiency initiative known as **"Travelling Warehouses."** Launched in FY2022, it resulted in a significant reduction in material transport. The project has led to a complete redesign of the entire fleet of vans used by technicians who carry out maintenance work at customers' premises in Italy. The vans are fitted with shelves and drawers containing materials and spare parts, all **bar-coded**. This system allows automatic reordering of missing parts when stock is low, resulting in significant savings in packaging and mileage to restock the fleet.

During FYE2024, Nippon Gases noted a growing interest and sensitivity among medical customers to environmental issues. In response to these demands, the Group developed improved proposals for the environmental sustainability of **hospital buildings**. Nippon Gases intends to replace incandescent and neon lamps with LED lamps at its medical gas stations and cylinder depots to reduce environmental impact and energy consumption.

In addition, the Group has decided to invest in installing photovoltaic systems on the mixers to produce synthetic medical air, thus contributing to the supply of clean energy to the mixers. Specifically, photovoltaic systems will be installed on the synthetic medical air mixers of the Sandro Pertini Hospital and the S. Eugenio Hospital, both belonging to ASL2 in Rome.

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2.8 Solutions offered for Healthcare

In the **medical sector**, Nippon Gases Pharma offers its customers a wide range of services, instruments, and technologies. In addition to medical gases and distribution systems, it also supplies:

- operation of **cryobiological rooms**, including the supply of nitrogen, equipment, and services;
- control and prevention of **air** quality, including monitoring, treatment, and sanitisation;
- services for **treating** patients with **pulmonary hypertension**-related diseases;
- management of operating theatres and **Antiblastic Drug Units (AFUs)** for environment and process validation;
- services for administering **Helium** and **Oxygen** mixtures to treat patients with acute respiratory distress;
- sedation products containing **Nitrous Oxide** and **Oxygen**;

Among the advanced respiratory systems provided by Nippon Gases Pharma:

- **Portable** respiratory systems, consisting of easily transportable medical gas cylinders with integrated regulators;
- delivery systems for high flow requirements, such as the **Heliox Vapotherm Precision Flow®** from Nippon Gases, for the treatment of respiratory insufficiency;
- **Ninoxan®**, a gaseous mixture of Oxygen and Nitrous Oxide, that can rapidly induce a sedative-analgesic state in a patient, particularly suitable for the treatment of of short-lasting from mild to severe pain conditions.

The medical gases in the **cryogenic tanks** undergo regular quality and compliance checks through spot sampling analysis. If any non-conformities are detected, immediate action is taken according to specific procedures to swiftly address and resolve deviations from specifications.

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Routine maintenance is also planned and regulated by **Norms UNI 10147, UNI EN 13306, UNI 11100, and UNI 10224/93**. This includes performing functional and safety checks, as well as replacing worn or consumable parts during regular working hours. These interventions, performed regardless of fault occurrences, aim to reduce the likelihood of malfunction or deterioration in the asset's functionality and safety.

By the end of March 2024, Nippon Gases Pharma had obtained CE certifications for its equipment classified as medical devices, in compliance with the EU Medical Device Regulation **745/2017**. Certificates were issued for centralised medical gas distribution systems, as well as vacuum and evacuation systems for anesthetic gases and nitrous oxide mixtures.

The project, which began over two years ago, involved both the **Regulatory Affairs and Medical Engineering** teams. Following a thorough review of the technical documentation, the **Notified Body Certiquality S.r.l.** carried out the final certification phase in February 2024. The audit concluded with excellent results, finding no non-conformities, largely due to the cooperation of the Customer Service team.

This achievement marks a significant milestone for the Nippon Gases Italia Group, as Nippon Gases Pharma is the first medical device plant manufacturer in Italy to receive CE marking under the **Medical Device Regulation (MDR)** from Certiquality.

Another innovation developed by the company's medical division is **telemedicine**, an evolution of homecare service. The possibility to monitor patients remotely reduces travels and the ensuing risk of contagio, and provides information on patient's health conditions in real time, enabling the physician to intervene immediately as needed.

To enhance process efficiency, Nippon Gases Pharma has introduced new **software** that offers access to three different applications through a single portal, Nippon Gases Online.

1. **Traceability** of mobile containers and liquid products;
2. **Telemonitoring** of medical gas dispensing stations;
3. **Management** of maintenance for all plant infrastructures.

The web-based information system can be easily accessed by hospital staff from any internet-enabled device, whether mobile (e.g., tablet) or stationary (e.g., PC).

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Audit, environment validation and new project consulting services

Always sensitive to the health and safety of operators and patients, Nippon Gases Pharma provides advice and support for the verification and validation of controlled contamination environments and equipment in accordance with current regulations.

The service offered by Nippon Gases is aimed at healthcare facilities for quality analysis of **operating theatres, clean rooms, laboratories, PMA, UFA and sterilisation facilities**. In addition, it can help define requirements, review documentation and test, plan, and perform periodic validation.

Nippon Gases Pharma can also help carry out **Risk Assessment** for products and services.

Environmental validations

Increasingly stringent pollution limits, the growth of activities in the healthcare sector (operating theatres, PMA, UFA), and the growing attention paid by all to quality, require careful monitoring of the functionality and efficiency of installations serving these environments.

Media Fill

- Validation of manufacturing processes for sterile galenic preparations (antiblastic/ chemotherapeutic and radiopharmaceutical).
- Writing the relevant sterile preparation validation protocols and assisting preparation technicians in all stages of media fill test preparation.

Environmental monitoring

- Anaesthetic Gas Monitoring (N_2O and/or Halogenated).
- Monitoring Volatile Organic Compounds (e.g. Formaldehyde, Xylene, Ethanol).
- Antiblastic Chemotherapy Monitoring (Wipe, Pad test and urine).

Training

- Training courses for technical and health personnel on the functionality of the equipment and regulatory requirements.
- Requirements for operating instructions and validation protocols.
- Training and specialist training for controlled contamination environments, assessment of the use of collective protective equipment (CPR) and personal protective equipment (PPE).

Advice

- **Design evaluation** for new laboratories and cryobiological rooms and revamping;
- Implementation of **new procedures and technologies**.

In the hospital care sector, Nippon Gases Pharma has patented **EISEI$_{NG}$**, a solution for the continuous treatment and **sanitisation of air**, applicable under both normal and emergency conditions, such as during Covid-19. This system features continuous environmental monitoring that tracks up to 12 parameters related to room quality, comfort, electrosmog (including Wi-Fi), and other customizable factors.

The collected data can be accessed through an **online platform** available on both PCsand smartphones This data is then analysed to develop action plans for improving indoor air quality. In recent years, over **100** of these systems have been installed in Italian healthcare facilities, establishing them as a leading product in the environmental sanitisation market.

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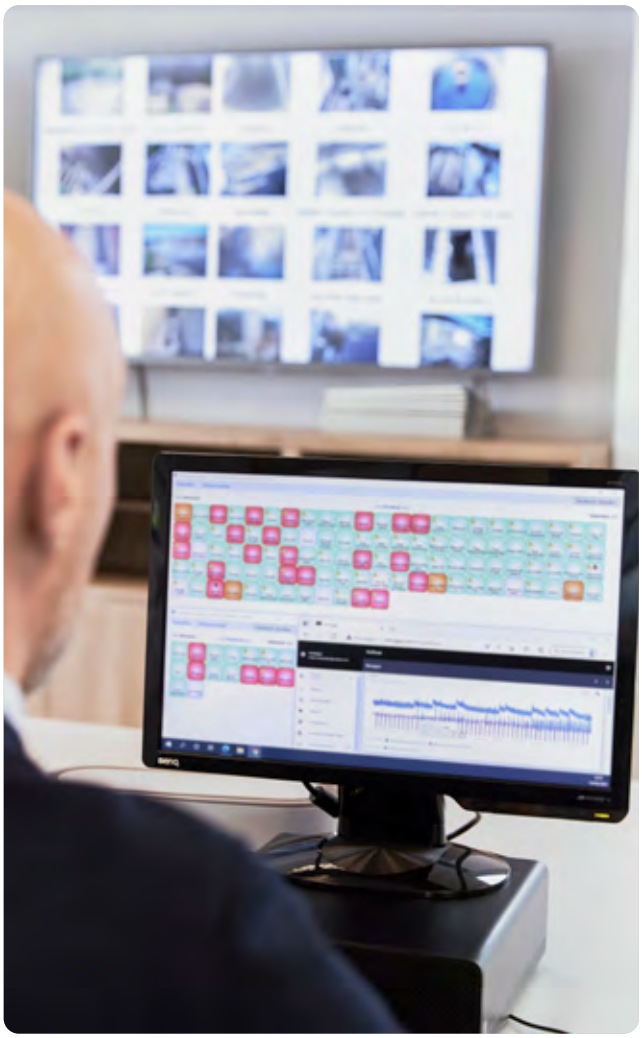
Additionally, Nippon Gases Pharma is setting increasingly ambitious targets for managing environmental aspects, focusing on energy consumption and resource optimisation to minimise environmental impact. An example of this is the **TOTAL GAS MANAGEMENT** project, a service that enhances hospital site management by providing a specialised operator to oversee gas supplies on behalf of the customer. As part of their commitment to sustainability, Nippon Gases provides hybrid cars for daily and on-call travel to the health facilities across various ASLs.

Another innovative tool is the **Digital Site Log**, where Nippon Gases Pharma technicians document operations on medical gas production facilities. This system allows for the reduction or elimination of paper use by directly recording data on an electronic database via a tablet.

In FY2024, the Group continued to improve the **synthetic air production systems** used in healthcare facilities, making them more energy efficient and therefore more cost effective, while maintaining high quality. The mixing system is designed to seamlessly integrate with the **telemonitoring** system, directly communicating with the central remote control server and transmitting all operating parameters and alerts. Technicians can remotely adjust operating parameters or respond to alarms directly. This system replaces compressors and filters-machines that are energy-intensive, noisy, and require costly maintenance with oil and filter cartridges. In contrast, the **medicinal air** produced by the blending system uses **Oxygen** and **Nitrogen** already qualified for pharmaceutical use, with minimal energy consumption confined to the remote supervision and alarm management system.

Additionally, in response to needs identified during hospital inspections, Nippon Gases Pharma proposed installing tanks with larger capacities than those currently in use. This improvement increases the availability of **medicinal gases** by reducing the number of deliveries, minimising interruptions in hospital operations, and lowering CO_2 emissions due to reduced travel.

To mitigate the environmental impact of logistics, several initiatives were implemented, including optimising distribution management with software integrated into the plants' telemonitoring systems, upgrading the vehicle fleet to **Euro 5** and **Euro 6** models, and increasing tank sizes to reduce the frequency of product deliveries. These actions resulted in an estimated annual reduction of **19,381.95 kg** of **CO_2** emissions.



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2.9 Solutions for refrigeration and air conditioning

In the field of refrigeration and air conditioning, Nippon Gases Italia operates through **Nippon Gases Refrigerants** (fully acquired by Nippon Gas Italia in 2023 and set to merge into Nippon Gas Industrial on July 1st, 2024). They offer a complete range of **low GWP** refrigerant gases, along with advanced products, services, and technical solutions for **commercial** and **industrial refrigeration**, all in full compliance with environmental regulations. The long-term collaboration relationships established with the world's main refrigerant producers enable Nippon Gases Refrigerants to have primary access to technological innovation in the sector, which has promoted the development of in-depth knowledge and professional skills over time.

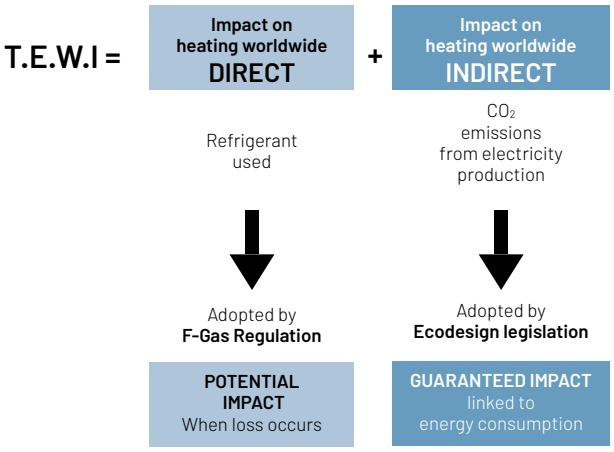
The Group is constantly searching for solutions to reduce the potential environmental impact of the supplied refrigerant gases. In light of this, Nippon Gases Italia and Nippon Gases Refrigerants are prepared to meet the increasing demand for specific refrigerant gases, driven by the **European F-gas Regulation (EU) 2024/573**, which imposes limits on the use of fluorinated gases in new commercial refrigeration equipment. A significant shift towards the use of low-GWP (<150) natural gases is anticipated.

In general, in response to these evolving regulations in recent years the chemical industry has continued to introduce new candidate substances to replace high impact refrigerants. Nippon Gases offers a full range of new generation refrigerant gas solutions to reduce **CO_2eq** emissions, thanks to its cross-market presence and collaborations with national authorities, trade associations, designers, **Original Equipment Manufacturers (OEMs)**, distributors, installers, and universities. In addition, the Group offers energy analyses for the development of consumption efficiency solutions for active plants. These actions include promoting low-GWP synthetic gases as retrofit solutions for outdated systems or in new-generation machines, as well as using natural gases such as **CO_2 (R-744)**, **Propane (R-290)**, and **Ammonia (R-717)** in commercial refrigeration to replace HFCs.

Energy efficiency for cost reduction

When choosing a plant, in addition to the GWP that measures the direct emission fraction and the resulting impact on global warming, the indirect **CO_2** emissions must also be valued.

The latter accounts for most of the environmental impact and reflects the operating costs associated with electricity consumption over the lifetime of the refrigeration systems. The sum of the Direct and Indirect impact is the T.E.W.I. **(Total Equivalent Warming Impact).**



Nippon Gases Refrigerants offers its customers new refrigerant gases, characterised by high stability during use in systems and a low permanence in the atmosphere, limiting their environmental impact to a minimum. By selling new generation refrigerant gases **HFO (Hydrofluoroolefins)** with low GWP , in lieu of **HFC (Hydrofluorocarbons)** having a high GWP, Nippon Gases Refrigerants was able, from 2016 to FYE2024 to achieve a reduction in emissions from its customer using this new technology of **over 485 tons of CO_2 eq**.

In the field of plant-based refrigerants, strict regulations mandate that these gases, classified as special hazardous waste, must not be released into the environment. Refrigerant gases must be recovered in accordance with regulations and disposed of or regenerated by specialised companies. Nippon Gases Refrigerants offers the **EcoStar™** service, which provides full assistance with the recovery and treatment of refrigerant gases thus contributing to the pursuit of a circular economy.

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Authorised to handle 1,000 tonnes of special hazardous waste annually at the **Bagnatica (BG) plant**, Nippon Gases Refrigerants also advocates for the use of remanufactured products, encouraging their adoption among customers.

In FYE2024, Nippon Gases launched the new **easyEcoStar™** service to promote the circular economy of refrigerant gases in response to the European F-gas Regulation (EU) 2024/573, which requires substantial reductions in CO_2eq. This service offers a financial incentive for each kilogram of recoverable gas, enabling the reclaimed gas to be reused through new purchases.

Nippon Gases Refrigerants has been able to take advantage of the great benefits associated with the use of digital technologies by promoting training and information activities aimed at both its customers and sales force. Among these initiatives is the introduction of advanced energy efficiency solutions, integrated with Artificial Intelligence, in collaboration with **Alperia Green Future** (an Alperia Group company). The proposed technological solution, **Sybil® HVAC**, serves as a control system for **HVAC&R** systems, optimising performance through advanced automation and machine learning algorithms. This approach enables real-time regulation of air conditioning devices based on external factors like temperature and room occupancy, thereby enhancing the overall energy efficiency of the systems.

Nippon Gases continues its partnership with the **Department of Energy of the Politecnico di Milano** to develop important experimental work. The aim is to evaluate the performance of a small water-to-water heat pump by identifying alternative fluids to **R134a**, a refrigerant still widely used but with high **GWP**. This refrigerant will gradually be replaced with solutions that have a lower environmental impact. The alternative refrigerant gases being studied offer a viable option for retrofitting existing refrigeration and air-conditioning systems, leading to significant reductions in **CO_2eq** emissions.

NIPPON GASES' COMPLIANCE WITH THE NEW F-GAS REGULATION (EU) 2024/573

The CO_2 technology offered by Nippon Gases provides an alternative to traditional fluorinated gases, reducing environmental impact through enhanced performance and improved system energy efficiency. CO_2 for refrigeration (designated R-744 by **ASHRAE**) must meet specific purity standards to ensure safe and optimal use in refrigeration systems.

Supporting the goals of the **F-gas regulation** to favour natural and low-GWP gases, Propane (R-290) is also an excellent candidate for the green transition in the refrigeration, air conditioning, and heat pump (RACHP) sector. Given the anticipated increase in the use of **R-290** in the HVAC/R and commercial refrigeration sectors, Nippon Gases provides automatic first-load filling systems with a pumping mechanism that handles larger drums, up to 800 litres, as a replacement for 12-liter cylinders. This upgrade reduces the frequency of refills.

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Chapter 3

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Towards a carbon neutral world

An innovative, responsible, and sustainable organisation is essential in shaping both the present and the future of society. Thanks to its **scientific knowledge and specific skills**, the Group offers sustainable solutions in the field of industrial gases.

Nippon Gases is convinced that a harmonious relationship between people, society and the planet is the best way to work today and every day in the future. For this reason it encourages **collaborative innovation** to improve life through technological applications of its gases Thanks to digitalisation, research and development, Nippon Gases Italia can improve its services and customer experience, as well as facilitating the transition to a carbon-neutral industry

Nippon Gases 's commitment to its customers, suppliers, employees, collaborators and to the communities in which it operates, reflects a total dedication to the environment and sustainability.

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3.1 Innovation for the benefit of the environment

For Nippon Gases, innovation is the main lever for achieving both business objectives related to customer satisfaction and the environment. The Group is constantly working to **reduce the impact** of its operations on the planet. Thanks to a strongly results-oriented approach, combined with constant attention to customers, Nippon Gases has developed **processes** and **technologies** that meet the needs of a constantly evolving market, which is increasingly demanding in terms of sustainability.

In this environment, the constant exchange of know-how with both Nippon Gases Europe and the Japanese parent company is of fundamental importance. This exchange of technology and skills, aimed at continuous improvement, allows us to identify advanced solutions, to **help customers** to improve themselves in terms of quality, productivity, economy, and environment.

The Group applies rigorously its quality and safety policy, defining and disseminating the goals and implementation programmes. Continuous process improvement, the development of new ideas and products/services, and the creation of advanced, sustainable solutions are core aspects of Nippon Gases' organisational culture, essential for achieving a competitive market advantage. Several departments within the company lead the innovation and development of carbon neutrality solutions. The **Marketing and Development Division** is specifically responsible for creating technologies in the industrial and healthcare sectors that transform customers' needs into opportunities for growth and improvement. This is made possible by strategic collaboration with suppliers and partners, as well as synergy and shared goals with customers themselves.

At Nippon Gases, the **Competitiveness** team is dedicated to driving the company towards excellence and market success, fostering economic growth. This is why the Competitiveness strategy is built on three pillars:

1. **Productivity**: focused on continuously improving processes to maximise profits and meet customer needs.

2. **Innovation**: investing in new ideas, products, tools, and processes to stay ahead of the competition.

3. **Engineering**: developing technologically advanced, cost-effective design solutions that adhere to international, local, and corporate standards.

By adhering to these principles, Nippon Gases embraces a **concretely sustainable approach**, viewing sustainability as a chance to enhance competitiveness. Digitisation projects, energy efficiency initiatives, and the use of non-polluting fuels like hydrogen are just a few examples of how the Competitiveness strategy incorporates sustainability goals into daily operations.

As in previous years, several (RPA) **Robotic Process Automation** projects were carried out. Many business processes have been standardised and automated to reduce manual operations and improve service delivery. During FYE2024, the automation of several back-office processes was completed, with a particular emphasis on the **purchasing and accounts payable departments**. Specifically, the processes for managing and updating orders and handling invoice receipts were automated. This acceleration boosted efficiency, which was quickly felt by the affected offices. The intention is to extend this experience to all business processes where automation can be applied, including those of the HR department and other processes that will be evaluated in the next financial year.

It is important to emphasise the role of the **Productivity** team, which has as its primary objective to optimise business, operational and organisational processes and to define strategies aimed at achieving a competitive advantage for the Group, also in terms of sustainability and environmental impact. To maintain its market position, in fact, a company must increase the productivity of the processes necessary to achieve business objectives, in order to increase its competitiveness both in times of growth and in times of downturn. The Productivity team also oversees a **tracking and monitoring** system for improvement and efficiency projects. This tool represents a major step forward in project management, allowing the impact of the measures taken on **energy savings**, water consumption and CO_2 emissions to be accurately monitored.

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Thanks to continuous monitoring, and a complete overview of projects, both completed and under development, makes it possible to evaluate their effectiveness and adopt appropriate strategies to further improve results.

Applying cutting-edge innovative technologies is a core activity of the **Innovation** department. As a result, several projects were launched during FYE2024 to evaluate the applicability of various technologies to company processes, with a focus on enhancing environmental and social sustainability. These projects, currently in the **preliminary evaluation** or **Proof of Concept** (PoC) stages, include Artificial Intelligence solutions for computer vision to detect hazardous situations within plants, the use of autonomous drones for plant monitoring, and the application of blockchain for tracing the sustainability information of our gases throughout the supply chain.

The Innovation function has also launched several circular economy projects, including exploring solutions for reusing waste sulfur from production processes and for repurposing CO_2 as part of **Carbon Capture and Utilisation** (CCU) efforts. Most of these projects are conducted in collaboration with innovative start-ups or SMEs, following the principles of **Open Innovation**.

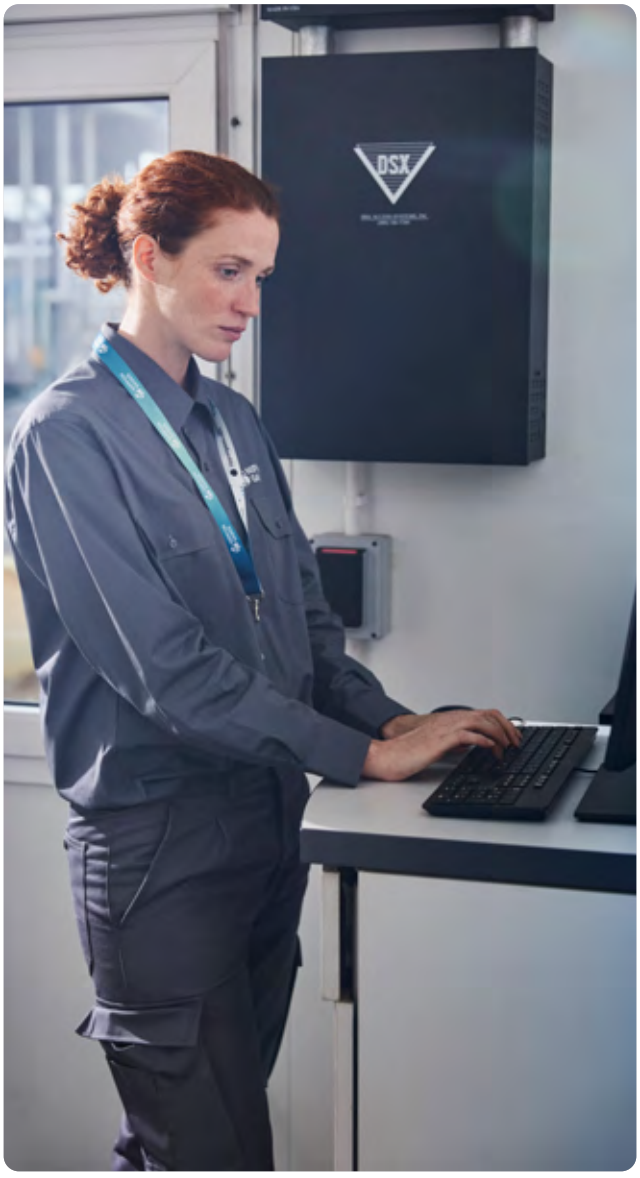
Nippon Gases' efforts to foster innovation, enhance operational efficiency, and empower its staff would be incomplete without the crucial support of the **IT Directorate**. In recent years, the team's strategic role has expanded significantly, establishing a strong organizational, technological, governance, and cultural foundation to transform Nippon Gases into a first-class company: automated, data-driven, collaborative, and secure.

In FYE2024, Nippon Gases launched the major **Project Virgil** to upgrade its **enterprise resource planning and management system** (ERP), transitioning from **AS400** to the **Oracle JD Edwards** system, which is used across Europe.

The project aims to consolidate and standardize planning systems across countries, streamline processes, unify and digitise practices, and enhance integration and user experience.

To enhance process efficiency, a new Configuration Management Database (CMDB) was launched in FYE2024, managing configuration items (CIs) and their relationships within the infrastructure.

A **CI** is any business element or asset that needs to be managed to ensure the successful delivery of services. The system will function as a **digital repository**—a dynamic, real-time database that, through network scanning, identifies and monitors assets. This approach ensures efficient management of IT components and their interactions across the enterprise, reducing inefficiencies and enhancing resource control.



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A key element for agile companies is the **Customer Innovation Experience**, which enables them to develop solutions that better align with consumer needs and build stronger, more collaborative relationships with their customers. Nippon Gases aims to create an experience that not only meets customers' needs and expectations but also actively engages and retains them over the long term. Nippon Gases enhances and solidifies customer relationships through the synergy of various departments: **Market Intelligence**, which analyzes market trends; **External Communication and Digital Marketing**, which handles the communication strategy; **Loyalty**, which focuses on customer retention and satisfaction; and **Sales Hub**, which manages remote digital sales. The Sales Hub supports different business lines and provides a commercial voice to technical support, particularly in projects involving the maintenance or replacement of equipment at customer sites.

INNOVATION GOVERNANCE

Innovation encompasses such a wide range that a company's management needs a comprehensive system to set and align goals, define policies and process priorities, allocate resources, and assign roles, responsibilities, and decision-making authority to key players. This is known as **Innovation Governance**.

During FYE2024, the Innovation team, with support from **The Doers**, developed the Innovation Governance framework for Nippon Gases Italia. This process involved interviews with 13 managers and directors from various departments, who helped shape the Group's innovation strategy.

This framework comprises six sections: three strategic and three operational.

1. **Why** (strategic): the purpose of innovation.
2. **Where** (strategic): where to focus innovation efforts.
3. **How Much** (strategic): the intensity of innovation.
4. **Who** (operational): the organisational model.
5. **How** (operational): innovation processes.
6. **With whom** (operational): external innovation partners.

One outcome of the Innovation Governance activity was the formation of an Innovation Committee. This committee, composed of the Director of Competitiveness, the Directors of Business Areas, the Director of IT, and any additional invited members, will be responsible for directing, coordinating, and approving innovation initiatives and related projects.

Following the establishment of Innovation Governance, an action plan was also developed to outline the strategy, set short and medium term goals, and provide a concrete plan of activities.

The pillars of this work plan are:

- **people**: fostering a culture of innovation and involving the entire company in activities and processes.
- **projects**:key initiatives that Nippon Gases Italia plans to develop.
- **processes**: establishing a unified process for managing innovation and collaborating with start-ups.

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Innovation driving process efficiency

During FYE2024, Nippon Gases developed numerous projects, most of which were aimed at defining a better strategic management of the Group's operational processes. The major projects implemented or initiated at the Group's sites in FYE2024 are as follows.

At the **primary production site in Ravenna**, a project was launched to upgrade the **valves** on the main Liquid Nitrogen and Liquid Oxygen storage tanks. This upgrade will further reduce product losses due to vapourization (approximately 1%-2%) and associated energy consumption. As a result, the plant will achieve greater efficiency in both production and sustainability, leading to significant energy savings.

At the Ravenna site, the **modification of the manifolds** for the primary air intake of the site's compressors has also been completed. By removing a section of the manifolds, the compressors' efficiency will be enhanced, as power consumption will decrease due to reduced pressure losses in the suction lines. The anticipated annual energy savings are over 1.5% in kWh.

At the CO_2 production site from geothermal sources in **Castelnuovo Berardenga** (SI), located in the Campo Pozzi area of the 'Ambra' Mining Concession, a project was undertaken to enhance the efficiency of the **calcium carbonate** separation process within the existing treatment tanks. This improvement aims to safeguard the area's water reserves. The **Politecnico di Torino** (Polytechnic University of Turin) conducted chemical and physical analyses of the incoming water, as well as morphological and particle size assessments of the calcium carbonate deposits. **Hysytech** also played a key role in assessing the potential to accelerate calcium carbonate deposition in the initial settling tanks.

For the **Rapolano site**, the primary initiative was replacing the **pipeline that transports raw CO_2** to the purification plant. The pipeline was replaced with new materials, resulting in an estimated annual energy saving of 8%.

At the **Verres Facility**, the key project involved optimising the **bypass valves** on the turbines to enhance liquefaction efficiency and boost liquid nitrogen production. Reducing the flow through the lamination valve increases the flow through the turbine, which allows the product to expand more efficiently. This lowers the temperature and reduces product losses. The estimated energy savings amount to 1%.

It is also worth noting the replacement of the old transfer lines for cryogenic products at the **Pontinia plant** with new lines featuring innovative **A-VIP technology**. This technology involves vacuum pipes with an additional insulating material, enhancing efficiency in transporting cryogenic products to the tanks. This upgrade has resulted in a noticeable reduction in product evaporation losses and an associated energy saving of 2%.

In the effort to upgrade and modernize secondary production plants, a significant investment at the **Anagni site** includes the installation of a **new CO_2 vaporisation system**. The new configuration is expected to reduce electricity consumption by 65% compared to the previous system.

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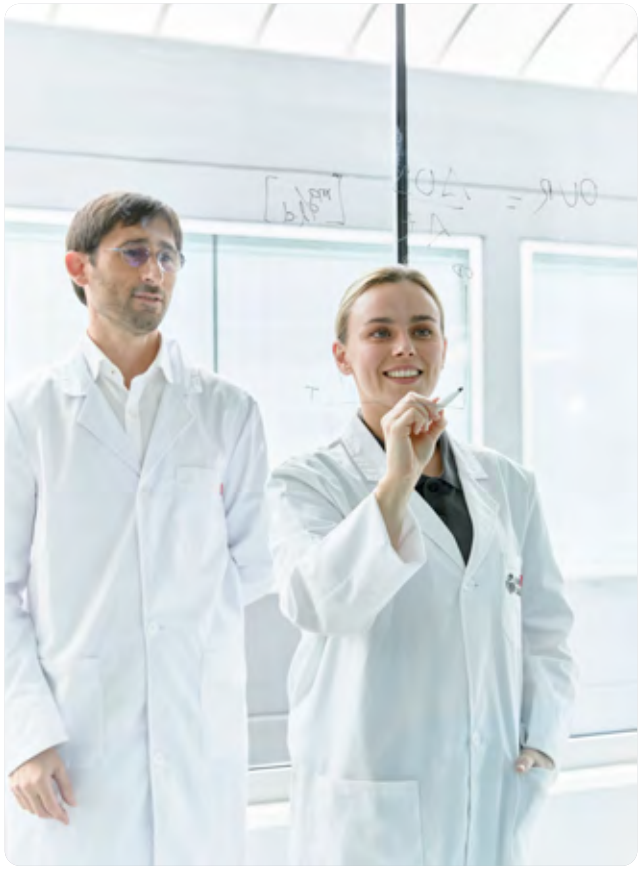
3.2 Nippon Gases Italia's and environmental sustainability

Nippon Gases Italia is committed to sustainable development daily, first in its plants and processes, through continuous investment in research and development to achieve increasingly ambitious goals in terms of energy consumption and optimisation of the use of resources.

To that end, the company collaborates with clients and suppliers to spread and promote increasingly innovative technologies, products, and services that respect the environment, reduce operative costs, and increase efficiency of processes.



In particular, Nippon Gases Italia scrupulously follows the Environmental Guiding Principles defined by Nippon Gases Europe:

- **Ensure that the companies** of the Nippon Gases Italia Group follow ethical courses of action and strive to achieve benefits for society, economy and environment;
- **Design and develop** products that are safe to manufacture, transport, use and dispose of or recycle;
- **Work** with customers, transporters, suppliers, distributors, and contractors to promote the safe use, transport, and disposal of chemicals, and to disseminate information about any risks and hazards associated with services and products;
- **Design and manage** plants in a safe, reliable, and environmentally friendly manner;
- **Promote the prevention** of pollution, waste reduction, energy saving and other critical resources in every phase of its products' life cycle;
- **Work with governments and organisations** to develop effective and efficient safety, health and environmental laws, regulations, and standards;
- **Support education and research** on occupational health and safety, environmental impact and product and process reliability;
- **Pursue the objective** of not causing accidents, or damage to human health and the planet both with the products and activities carried out, also openly communicating its performance in relation to health, safety, and the environment.

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WE ENABLE A CARBON NEUTRAL WORLD

Nippon Gases is actively pursuing the targets of the **Carbon Neutral World** initiative, which is shared by all the companies belonging to **Nippon Sanso Holdings Corporation** (NSHD), with the aim of reducing the carbon footprint, making a carbon neutral world possible and contributing to a sustainable society for the future.

Since its foundation, NSHD has remained at the forefront of research and implementation of engineering **technologies** and **equipment** for the optimisation and efficient use of gases, always offering the best solution to its customers.

NSHD, with its entire team of "Gas Professionals", is developing new projects to redefine and improve its portfolio of carbon neutral solutions, particularly in the following areas of interest that guide its vision.

Thanks to the synergies and expertise of the different industrial gases companies in the four geographic hubs - Japan, the United States, Europe and Asia & Oceania - and the circular economy vision of the **Thermos** branded business, the Group is able to pursue this global commitment, which unites all members and is key to helping customers reduce their carbon footprint.

The Carbon Neutral strategy enables NSHD to respond to the needs of the future and to strengthen the involvement and commitment to **sustainable development** that will make a carbon-neutral world possible.

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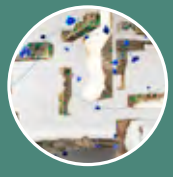
THE FIVE PILLARS OF A CARBON-NEUTRAL WORLD

Green combustion
the perfect combination the most advanced oxyfuel technology of Nippon Gases with alternative fuels (e.g. Hydrogen, Biomethane, Ammonia), enables industries to reduce fossil fuel consumption and greenhouse gas emissions The use of the Group's oxygen-based burners also facilitates CO_2 capture.

Solutions for Hydrogen
Nippon Gases facilitates access to the best and most appropriate solutions to produce green, low-carbon hydrogen in a sustainable manner, using the right balance of most appropriate production technology, available raw materials, and renewable energy. Nippon Gases has engineered, implemented, and constructed mixing and control plants, as well as **burners** that can operate on 100% hydrogen. In addition to the technology, Nippon Gases supplies hydrogen that aligns with the **green transition**, offering Renewable Hydrogen produced from renewable sources, as well as Low Carbon Hydrogen from various other production methods.

CO_2 Capture
By using the most appropriate CO_2 capture technology, Nippon Gases enables its customers to reuse CO_2 in various manufacturing processes or in other industries after purification, including the treatment of water and other effluents, as well as making it suitable for possible sequestration.

Circular economy
Recovered CO_2 waste products, residual heat, sewage sludge and industrial, agricultural, and urban waste can be used with the right technology to make production processes more sustainable. In collaboration with partners like **Hysytech**, Nippon Gases designs and offers plants for the valorization of processing waste, sludge from sewage treatment, and industrial, agricultural, and municipal waste. These plants generate biogas, biomethane, bioLNG, or syngas, which can be used as alternative fuels or as a base for chemical production. In line with a **circular economy** approach, the group is also exploring the use of recovered CO_2 to produce synthetic methane, methanol, or other fuels that can be directly reused at customer sites.



Digitisation
The wide range of gases, equipment and services offered by Nippon Gases is driving digitalisation as a lever for a circular business model towards a more sustainable future. The **ecological transition** is closely intertwined with the digital transition. The automation of processes, including the implementation of **Robotic Process Automation (RPA)**, digital solutions to eliminate paper, remote process control, and artificial intelligence for analysis and prediction, exemplifies the Group's commitment to digitisation in support of the transition to a zero-emission economy.

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During FYE2024, Nippon Gases has undertaken several initiatives to facilitate the industry's transition to a **low-carbon economy.**

A key initiative is the **Met4H$_2$** project, which includes 27 European entities, including Nippon Gases Italia. This project aims to advance and integrate the metrology needed to support the entire **hydrogen supply chain**, from production to end-user, and to enhance metrological traceability in the sector. Among the programme's various **work packages** (WPs), Nippon Gases Italia plays a key role in WP1, which supports the hydrogen supply chain, and WP3, which focuses on hydrogen gas quality. In WP1, which focuses on developing measurement infrastructure for the hydrogen supply chain to ensure health, safety, and environmental standards in hydrogen production, transmission, distribution, and storage, Nippon Gases contributes its expertise in analytical techniques for H_2 analysis. The goal is to gather comprehensive information on current advancements in the field. Additionally, Nippon Gases is tasked with providing input and reviewing guidelines developed by other organisations for the validation, calibration, and verification of hydrogen analysers.

Regarding WP3, which focuses on developing metrological tools to ensure reliable and traceable measurements for quality control of hydrogen throughout the supply chain, Nippon Gases' contribution is multifaceted. In fact, the Group is required to:

- **provide insights** on key sampling points, particularly regarding pressure, temperature, humidity, sampling frequency, safety and volumes;
- **assist in developing guidelines** on best practices for hydrogen sampling and quality monitoring throughout the supply chain;
- **showcase the functionality** of the developed instruments by performing real-time monitoring of key contaminants at various points in the supply chain, from production to distribution;
- **grant access** to monitoring points that adhere to the sampling systems developed within WP3.

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Another international project that actively involved Nippon Gases was **PrometH_2O**. The project involves 19 entities, including four Italian organisations: **Nippon Gases Industrial**, **INRM** (National Metrological Research Institute), **SUN** (University of Campania Luigi Vanvitelli), and **UNICAS** (University of Cassino and Southern Lazio).

The main objectives of the programme are:

- developing metrologically valid methods and techniques for measuring trace water;
- creating standards for trace water in specific gas matrices;
- enhancing knowledge of thermophysical data for non-ideal wet gas mixtures;
- demonstrating improved trace water measurement methods in industrially relevant plants.

Nippon Gases played a leading role in WP3, focusing on the demonstration phase of trace water measurement methods and techniques, with the goal of facilitating technology adoption by end users.

In other words, Nippon Gases organised a **protocol for conducting tests** at the **Chivasso facility**, providing technical and safety expertise, gases, and laboratory space. The involvement culminated in the execution of tests in early November 2023 and the drafting of a standard protocol.

Another innovative project initiated during FYE2024 is the **Hydrogen Valley**, a collaboration between **Duferco**, **Caronte S.p.A.** and Nippon Gases Italia. The project aims to establish a Hydrogen Valley at the Giammoro (ME) site, which will produce approximately 100 tonnes of green hydrogen annually. This will be achieved using a 4 MW photovoltaic plant and a 1 MW electrolyser. The project will be funded in part through the "Hydrogen Valleys" call of the **National Relaunch and Resilience Plan** (PNRR), aimed at supporting green hydrogen production in repurposed industrial sites in Sicily. The project will feature an electrolyser for producing renewable hydrogen (RFNBO - Renewable Fuel of Non-Biological Origin), along with a system for purification, compression and storage.

WORKSHOP H_2

Nippon Gases has launched multiple projects aimed at developing **green hydrogen** solutions and technologies. It is widely acknowledged that H_2 will be crucial in the ongoing decarbonization process, especially for sectors that are challenging to electrify.

In this context, innovation is essential for **discovering new technologies**, products and sustainable business models in the hydrogen sector.

During FYE2024, the **Innovation function**, in collaboration with **Politecnico di Milano**, organised a workshop focused on hydrogen. The workshop aimed to both assess the current state of the industry and explore potential strategic actions Nippon Gases could take in this market.

The workshop, held over two days, involved about 10 colleagues from various business areas.

The first day featured a training session led by professors from Politecnico di Milano, offering an overview of market trends, **technological advancements** supporting hydrogen's role in decarbonisation, and the relevant regulatory framework.

On the second day, participants engaged in interactive activities to explore **strategic alternatives** and discuss their implementation.

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HEHS: High Efficiency Hydrogen Storage

Nippon Gases, in collaboration with partners **Aizoon** and**CIRIAF** (Interuniversity Centre for Research on Pollution and the Environment, University of Perugia), is advancing its work on the HEHS (High Efficiency Hydrogen Storage) project, funded by the PNRR.

The project aims to develop a novel hydrogen storage methodology using clathrate hydrates. This approach is designed to lower the energy costs of storage, enhance the safety and reliability of transportation, and improve the carbon footprint of the entire production and distribution process.

In the project's first year, Nippon Gases leveraged its expertise in gases and the production and analytical capabilities of its certified plant in Chivasso to study, optimise, and produce specific mixtures. These mixtures are designed to enhance the diffusion and stability of hydrogen in methane, thereby reducing the energy needed for hydrogen storage and release.

Based on experimental results from the CIRIAF laboratory, partner Aizoon developed methods using **Artificial Neural Networks (ANNs)** to create and validate a model for clathrate formation and dissociation processes, enhancing and complementing the laboratory test results.

It is also preparing a study for a prototype to be installed at a Nippon Gases site.

HEHS
HIGH EFFICIENCY HYDROGEN STORAGE

To conclude the section on **green hydrogen** projects, here are some FYE2024 initiatives in which Nippon Gases was involved:

- a feasibility analysis for a hydrogen plant designed to test ship engines, including the development of technical specifications and a detailed study.
- providing their patented control units and burners to test refractory performance in a small test plant, including combustion systems operating at 100% H_2.

In line with its Open Innovation approach, during FYE2024 Nippon Gases initiated several collaborations and partnerships with R&D centers and start-ups focused on **Carbon Neutrality**.

These initiatives include:

- A study on the **methanization of CO_2** produced during biomethane production using two-stage catalysts;
- A project to **transform biomass** into liquid organic hydrogen carriers, such as formic acid and formic aldehyde, which can be easily converted into H_2;
- The recovery of **liquid Helium** from medical MRIs through a partnership with a third-party company;
- The development of a **combustion cell** in the automotive sector, including a test facility for H_2 engines with hydrogen tanks and fuel cells;
- The **Jet Fuel** project, which involves creating a new research laboratory for testing H_2 aircraft engines.

For Nippon Gases, advancing innovation and environmental sustainability is crucial for continued growth and for establishing a strong and responsible presence in the market.

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3.3 Management of environmental aspects

In line with Nippon Gases Europe Group, Nippon Gases Italia's commitment to the environmental sustainability of its activities requires the adoption of clear procedures and well-defined policies, the implementation of environmental management systems, adherence to ambitious standards, and continuous monitoring of the impacts with the aim of controlling and reducing them. To this end, the Group is equipped with a management system for Health, Safety, and the Environment that is certified according to the main international standards.

Society	ISO 45001	ISO 14001*	EMAS**
Nippon Gases Italia S.r.l.	x		
Nippon Gases Industrial S.r.l.	x	x	x
Nippon Gases Pharma S.r.l.	x	x	x
Nippon Gases Operations S.r.l.	x	x	
Nippon Gases Refrigerants S.r.l.	x	x	

* *Certification obtained at the Anagni, Bagnatica, Brugine, Chivasso, Modugno, Novara, Ravenna, San Salvo plants and the distribution and Customer Service sites*

** *Certification obtained for the Chivasso and Novara sites*

In recent years, thanks to the certifications obtained and the policies put in place by the company, Nippon Gases Italia has accomplished significant results in the field of **environmental protection**, achieving a position of **excellence** in its sector.

This translates into concrete actions, including:

- **developing products and solutions** that can drastically reduce harmful emissions, such as the recovery of spent refrigerant gases and the commercialization of new generation refrigerant gases, or resource consumption;
- **commitment** to limit the impact of our production processes as much as possible;
- **elimination or drastic reduction** of the percentage of special waste in landfills;
- **certify** some production sites within the EMAS registration;
- **provide** a collection service for empty or non used cylinders at customer sites, so that they can be reused after undergoing the conformity and quality checks provided for by the applicable regulations;
- **Optimise** transport as much as possible by gradually introducing more modern and efficient vehicles and by introducing innovative software to plan and optimise deliveries.

Nippon Gases' attention to environmental issues is also confirmed by its full compliance with applicable environmental laws and regulations, even if the nature of its business does not present specific environmental risks.

Nippon Gases' main environmental impacts are related to the consumption of energy resources at the plants and the related emissions of **Greenhouse Gases (GHG)**, the consumption of water resources and waste management practices. Operatively, the Group endeavours to make efficient use of resources and monitor consumption levels continuously.

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3.3.1 Energy consumption

Nippon Gases energy consumption largely refers to the electricity consumption of its plants and offices, the consumption of fuel for the company's fleet and the consumption of fuel in the production plants.

	FYE2022	FYE2023	FYE2024
Methane	503,408.0	447,881.2	472,362.6
Diesel	14,691.7	17,457.8	14,433.5
Petrol	-	3,010.9	3,916.2
Fuel Gas	12,318.6	9,877.8	7,690.9
OffGas Shu	6,327.8	5,386.8	8,633.8
Direct consumption of energy from non-renewable sources	**536,746.1**	**483,614.5**	**507,036.4**
Consumption of purchased electric energy	912,122.7	**929,829.3**	**906,036.2**
- From renewable sources	583,758.1	**458,222.8**	**362,739.9**
Vapor	5,813.7	**9,421.9**	**12,765.5**
Indirect energy consumption	**917,936.4**	**939,251.2**	**918,801.7**
Total energy consumption	**1,454,682.5**	**1,422,865.7**	**1,425,838.1**

Energy consumption by source (GJ)

As shown in the table of energy consumption by source, energy consumption increased slightly (0.2%) compared to the previous year. In particular, the direct consumption of the fuels used in the production processes increased by 4.8% due to the increase in the consumption of methane gas, while the indirect consumption decreased 2.2%.

Direct energy consumption represents 35.6% of total energy consumption and 93.2% is made up of methane consumption. The remaining 6.8% of direct energy consumption is made up of Diesel, Petrol, Fuel Gas and OffGas Shu. The consumption of Fuel Gas and OffGas Shu used in the industrial processes of the Ravenna Chemical Pole to replace natural gas respectively decreased by 22.1% and increased os 60.3%.

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3.3.2 GHG emissions

Greenhouse gas emissions arising from energy consumption were determined according to the main international standards (see the Methodological Note for further information) and in this document are reported as

- **Scope 1 direct** emissions: greenhouse gas emissions from sources owned or controlled by an organisation, such as emissions related to fuel consumption or refrigerant gas leaks into the atmosphere;
- **Scope 2 indirect** emissions: greenhouse gas emissions resulting from the production of electricity, heating, cooling, and steam consumed by an organisation, but purchased from third parties and therefore not directly generated;
- **Scope 3 indirect** emissions: greenhouse gas emissions from activities upstream and downstream of the value chain. Specifically, this report publishes the emissions associated with production, generation, transport and distribution of energy sources, logistics and, finally, the treatment of waste generated by production activities.

GHG EMISSIONSton CO_2eq)[5]

	FYE2022	FYE2023	FYE2024
Methane[6]	28,297.6	25,230.5	**26,697.0**
Diesel	886.2	1,336.1	**1,104.7**
Petrol	-	200.4	**284.6**
Fuel Gas	692.5	556.4	**434.7**
OffGas Shu	355.7	303.5	**487.9**
F-gas	4,519.0	1,907.3	**639.2**
Emissions Scope 1	34,751.0	29,534.2	**29,648.0**
Vapor	276.7	446.8	**637.0**
Electricity	41,827.3	59,786.1	**68,991**
Scope 2 Market Based Emissions	42,104.0	60,232.9	**69,628.1**
Total emissions (Scope 1 and Scope 2)	76,855.0	89,767.1	**99,276.1**

Scope 1 and Scope 2 GHG emissions (ton CO_2eq)

As shown in the table, the Group's **Direct Scope 1 emissions** remained nearly unchanged, with a slight **increase of +0.4%.** This trend reflects the balance between increased consumption of natural gas, petrol, and OffGas Shu, and decreased use of diesel, fuel gas, and F-Gas.

5 *It should be noted that for Scope 2 emissions, the table and graph show emissions calculated according to the Market Based Approach*

6 *It should be noted that the conversion of methane consumption into GJ for FYE2022 was done using the conversion factor provided by DEFRA 2021 'Net CV' in order to exclude losses. Consumption in previous years, however, was calculated using the DEFRA conversion factor for the relevant "Gross CV"*

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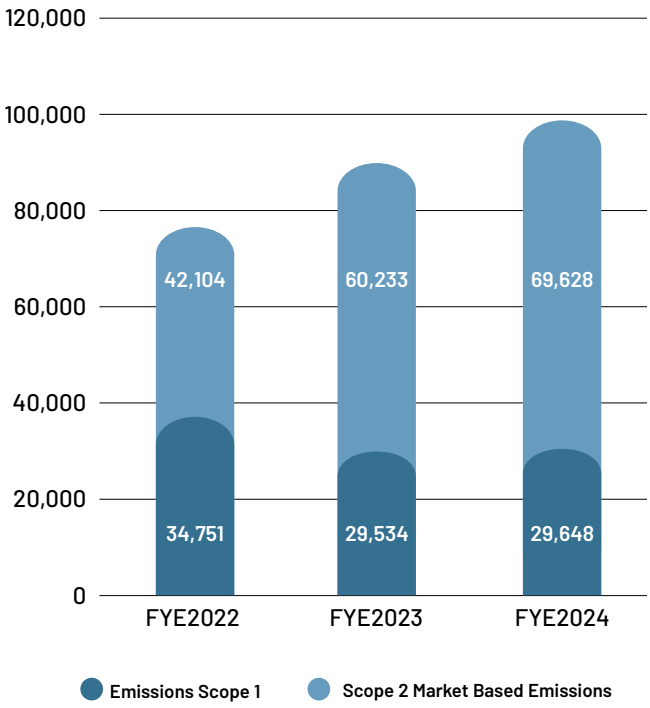
Scope 2 emissions, which account for 70.1% of total emissions, increased by 15.6% compared to FYE2023, This increase is mainly due to a reduction in the share of electricity purchased with renewable energy certificates.

Additionally, there was a minor increase in emissions related to steam purchases. Scope 2 emissions have been calculated using the **Market Based** Methodology, which includes an emission factor that considers the residual mix, i.e. the electricity produced exclusively by the National Thermoelectric Park, excluding renewable sources, but setting emissions from certified green electricity to zero.

Instead, using the **Location Based** approach, which requires the use of emission factors related to the specific national energy mix for electricity generation, Nippon Gases Italia's Scope 2 emissions amount to 79,217 tonnes of CO_2eq, which is 3% higher than the previous year's Scope 2 emissions calculated using the same approach.



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For the second year, Nippon Gases reported all the categories of Scope 3 indirect emissions that were applicable to the company, along the entire value chain:

- identify the risks and opportunities associated with value chain emissions;
- identify opportunities to reduce greenhouse gases, set reduction targets and monitor performance;
- involve the suppliers of the value chain in the management of greenhouse gases.

	Scope 3 Categories	FYE23 tonsCO_2eq	FYE24 tonsCO_2eq
Upstream (Categories 1-8)		124,357	**147,655**
Category 1	Purchased goods and services	97,907	**117,260**
Category 2	Capital goods	19,580	**23,544**
Category 3	Fuel and energy related activities	6,858	**6,841**
Category 4	Upstream transportation	NA	**NA**
Category 5	Waste generated in operations	12.3	**9.7**
Category 6	Business trips	NA	**NA**
Category 7	Employee commuting	NA	**NA**
Category 8	Asset in leasing upstream	NA	**NA**
Dowstream (Categories 9-15)		397,747	**274,443**
Category 9	Downstream transportation and distribution	15,539	**15,723**
Category 10	Use of sold products	NA	**NA**
Category 11	Use of sold products	374,764	**248,851**
Category 12	End-of-life treatment of products sold	NA	**NA**
Category 13	Asset in leasing downstream	7,444	**9,869**
Category 14	Franchising	NA	**NA**
Category 15	Investments	NA	**NA**
Total emissions Scope 3		522,104	**422,098**

Nippon Gases Italia[7] Scope 3 emission

7 *It's important to note that, compared to the FYE2023 report, the methodology for calculating Scope 3 emission categories has been updated to align with the approach used by Nippon Gases Europe in publishing the Group's emissions inventory. Consequently, the FYE2023 values were recalculated to ensure consistency and comparability with the FYE2024 data.*

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The calculation of **indirect Scope 3 emissions** will allow Nippon Gases Italia to gain more awareness and take action on its value chain through targeted actions, aimed, for example, at making logistics more efficient or making the evaluation criteria for selecting its suppliers increasingly stringent.

In FYE2024, Scope Emissions **Category 11**, which accounts for greenhouse gas emissions from the use of products sold by Nippon Gases, is the largest contributor to indirect Scope 3 emissions having an impact of about 59 percent of the total value. Compared to the previous fiscal year, for the same category there is a significant reduction in emissions (-34%) mainly due to the strategic activity carried out by the Nippon Gases Refrigerants team that supported its customers in the transition to the use of alternative refrigerants. In particular, thanks to in-depth product knowledge, Nippon Gases was able to identify refrigerant products with lower global warming impact (lower GWP - Global Warming Potential) compatible with the systems in use at customers, reducing or eliminating the possible negative impact of equipment replacement. The introduction of low-GWP refrigerants into the refrigeration and air conditioning market is a growing trend, and Nippon Gases wants to be a reference point for the market by providing the necessary advice as well as products.

Second in relevance, to **Category 1** of Nippon Gases' Scope 3 emissions, which considers emissions from the manufacturing activities of purchased products, accounts for 28 percent of total Scope 3 emissions and is therefore a category of particular focus for Nippon Gases in its journey toward carbon footprint reduction. There was a slight increase from the previous fiscal year, mainly attributable to the increase in the quantity of purchased products.

This was followed by **Category 2** emissions associated with investments, which increased from the previous fiscal year due to new production units being built.

Scope 3 Emissions **Category 9**, which takes into account emissions associated with business logistics, covers about 4% of total Scope 3 emissions in FYE2024. Nippon Gases Italia has been working to develop, for many years now, a number of projects related to the efficient distribution of its products. Even with an increase in volumes, the quantities of Carbon Dioxide equivalents are unchanged from the previous year. These results achieved by the Bulk Distribution and Package Distribution functions are in continuous and synergistic collaboration with their carriers.

In particular, the factors that contributed to this result certainly include the aforementioned meticulous management of Bulk distribution, which is marked by the growth of the kg/km indicator, the number of kilograms of product transported for the distance covered. This parameter has precisely improved due to a number of initiatives, including further development of the **ORTEC** software. The contribution of the Distribution Package has also been crucial, especially through the revision of the logistics set-up achieved through fleet modernization and route optimization.

Finally, the remaining categories of Scope 3 emissions together account for **3% of Nippon Gases Italia's total Scope 3 emissions** in FYE2024. This percentage includes emissions from a range of activities such as the production the generation, transportation and distribution of energy sources, the treatment of waste generated by business operations, and consumption related to plants installed at customer sites.

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3.3.3 Waste and water management

Responsibility toward the environment requires the correct management of waste and a commitment to reducing it.

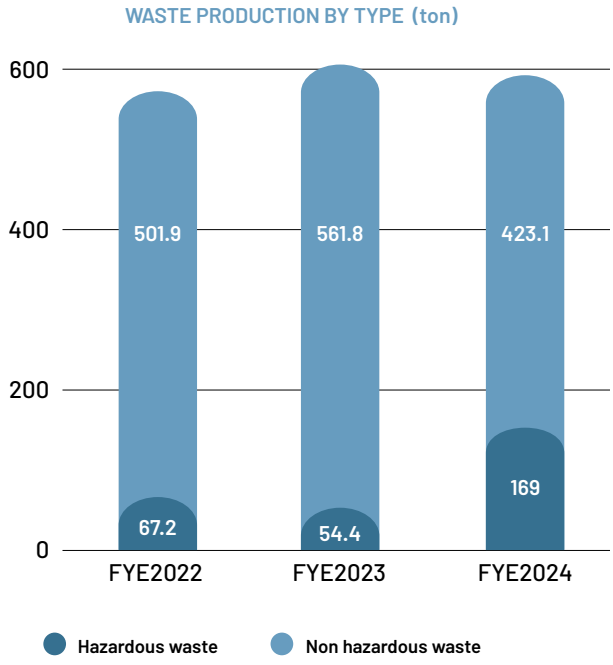
FYE2024 Nippon Gases Italia's production, activities generated a total of **592** tons of **waste**, marking a decrease of **3.9%** compared to the 616.2 tons produced in the previous fiscal year.

In FYE2024, **71.5%** of the waste (423.1 tonnes) is non-hazardous waste, while the remaining 28.5% (169 tonnes) is hazardous waste in the previous fiscal year.

Waste is mainly generated during maintenance and testing phases of equipment. The containers (cylinder, cistern, tank) aren't "disposable", but they are reused until the end of their life, after tens of years of use.

The discarded container during the testing phase (at periodic requalification) is considered the end-of-life of the container itself and generates metal waste (non-hazardous) and other types of waste, such as sand and wash water, which should be considered as downstream waste in the value chain of Nippon Gases' activities.

Other types of waste arising from production activities are earmarked for recovery; this applies, for example, to rotary machines hydraulic oils, plastic from packagings, timber from pallet, paper.



Extraordinary waste is generated when obsolete equipment is decommissioned, which may result in higher quantities of ferrous metals, oils, oil-soaked rags or extraordinary cleaning of equipment, which may generate unconventional waste related to the activities of the site itself.

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There are significant data points: the amount of hazardous waste generated by the the customer service at client's premises during the maintenance phases of the plant, and the amount of refrigerant gas that is reprocessed at the Bagnatica plant, where it can be recovered.

In the first case, the waste is uploaded to the Customer Service register of the plant in the relevant area, with the data from off-site being entered in the register of the nearest Group production site, thus increasing the amount of waste generated.

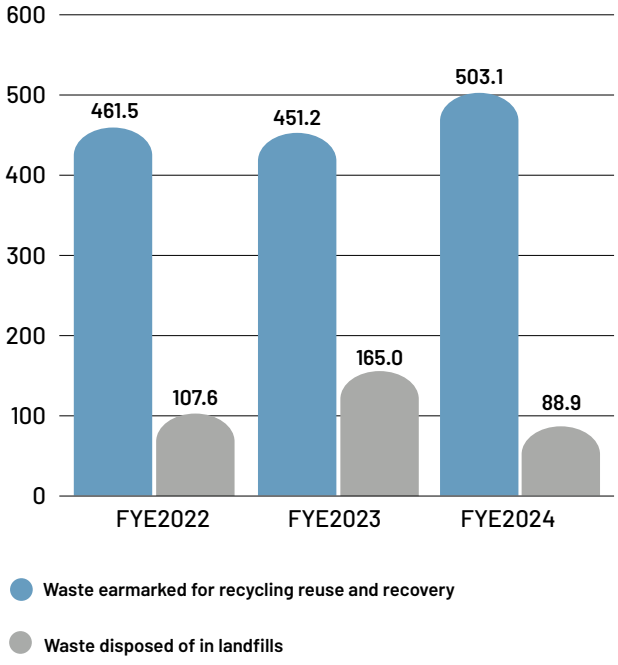
In the second case,under the EcoStar™ service, the purity of the exhaust gas sent to the Bagnatica plan distinguishes between the possibility of reprocessing the gas or sending it to landfill,

85% of the waste generated (equivalent to 531.1 tonnes) was sent for recycling, reuse or energy recovery, while 15% (equivalent to 88.9 tonnes) was sent to landfill: the significant improvement over the previous year shows the Group's commitment to proper waste management. Compared to FYE2023, the percentage of waste recycled increased by 11.8% (51.9 tonnes), leading to a reduction in waste sent to landfill by 76.1 tonnes.

Nippon Gases' sites have standardised production processes and, as a result, the waste generated tends to be similar over the years, both in terms of CER codes (EWC - European Waste Codes) and quantities.

Specifically, there may be some variation over the years due to the willingness of the landfill to accept the waste, so the type of disposal intended may not be the same from year to year.

WASTE PRODUCED BY METHOD OF DISPOSAL (ton)



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All waste generated by the Group is delivered to authorised intermediaries or waste disposers. Waste transport is handled by **certified companies**. For waste generated during maintenance at customer sites, such as hydraulic oil, **Customer Service** uses its own authorised vehicles.

Waste management is **site-based** and, depending on the geographical area, local disposers are used. All **suppliers** are **qualified** and the contract with them is concluded after an administrative check of the authorisations, such as ministerial authorisations (also by consulting the official archives on the MITE website) and the signing of a purchase order.

Nippon Gases constantly monitors the production and management of waste: the waste-producing sites record the waste produced. Waste data is reported to the Group on a quarterly basis and validated by each site upon receipt of the fourth copy of the waste formulary. Every year, the company transmits waste related data to the local authorities by compiling the environmental declaration form **(Modello Unico di Dichiarazione ambientale - MUD)**.

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On the part of the production sites, there is a constant focus on reducing waste and the search for waste management companies that can guarantee the recycling of waste, reduce the amount of waste sent to landfill and implement a circular economy process.

At most of Nippon Gases' sites, **separate collection of municipal solid waste** has been introduced and wax ink printers have been used to eliminate the use of toner and the production of hazardous waste. In addition, all offices use the Print Reduction Programme, which regulates paper consumption.

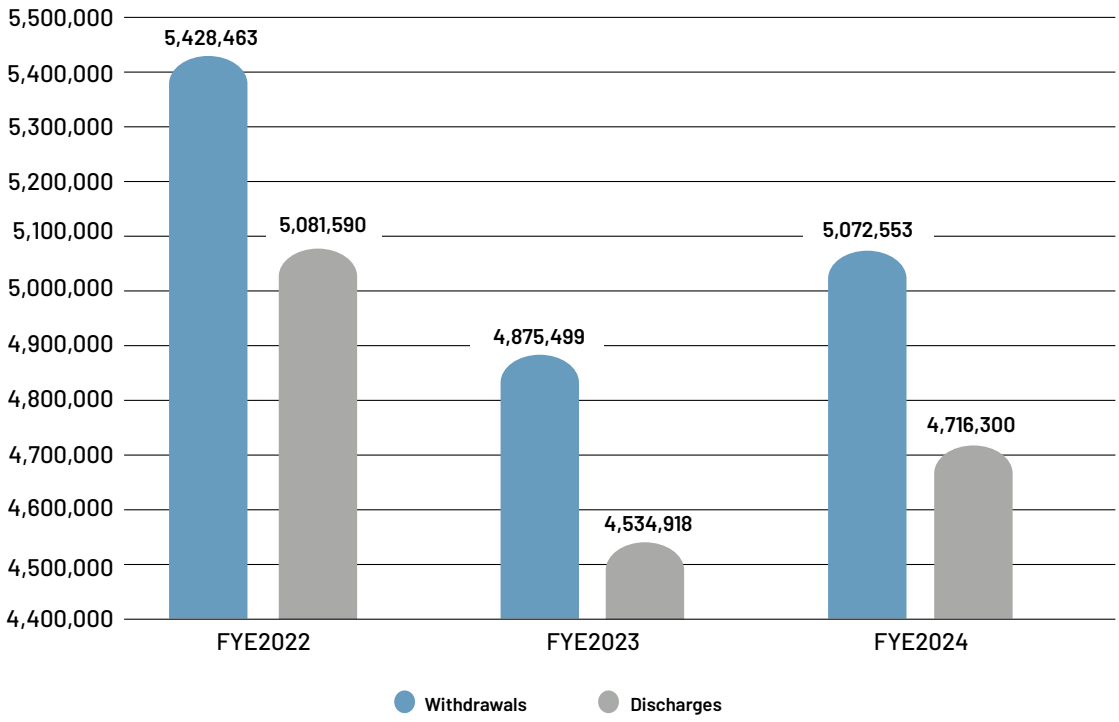
Programmes to reduce non-hazardous plastic waste from our activities are also underway at the European level.

Nippon Gases is committed to developing numerous projects, also in partnership, to promote circular economy and waste recovery. One of these is the project carried out with **IREN Ambiente** to build an organic waste treatment plant to produce biogas, which is made up of methane and carbon dioxide.

The project also involves the purchase of CO_2 produced by Nippon Gases Italia, which supported IREN Ambiente in obtaining the certifications needed to produce and market food-grade CO_2.

Nippon Gases' s attention to environmental impact also extends to water consumption. Water procurement sources are numerous and diversified. For the primary production plants (Bulk), which represent the Nippon Gases sites that consume the most water, the sources are artesian wells and Consortium water for industrial use.

WATER WITHDRAWALS AND DISCHARGES (m^3)



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Secondary production plants **(Package)** and offices mostly use water from municipal water systems.

Nearly half the sites discharge their water into surface waters (when associated with water withdrawal from municipal water systems). The remaining sites discharge either into industrial sewers managed by consortia, which provide for the treatment of wastewater in tanks before its final destination (such as the Ravenna and San Salvo sites), or into surface waters.

In FYE2024, Nippon Gases withdrew just over 5 million cubic metres of water, a slight increase compared to previous fiscal year (+4%).

Of these: 91.7% came from wells, 5.6% from private suppliers, 1.7% was demineralized water, 0.5% from surface sources and the remaining 0.5% from municipal distributors.

Discharges, equivalent to around 4.7 million cubic metres of water, were also increasing compared to the previous year (+4%).

Of these, almost all are discharges to surface water (97.3%), 2.1% are discharges to third party sewers and 0.4% are discharges to urban sewers. The remaining 0.2% is the water vapour recovered from the production of hydrogen which is transported and used by other players in the Ravenna petrochemical centre.

Water is both a utility (cooling water) and a raw material (hydrogen production) in Nippon Gases' production. Moreover it is used by the employees for general plant services and in the offices.

The sites that procure their water from natural sources (artesian wells) or from a municipal water system and discharge it into a surface water body are required to perform analysis to make sure they are not discharging substances that may alter the natural balance and disrupt biodiversity.

The water discharged by most sites is not altered in any way and, only in the Ravenna plant a small proportion of the water which is used in hydrogen production, is vaporised and comes out as vapour.

All production sites have water discharges authorised by AUA **(Single Environmental Authorisation)** or AIA **(Integrated Environmental Authorisation)**, for which they must ensure at least annual checks of the parameters specified in the authorisations and carry out quality and quantity monitoring of the quantities discharged.

All events that could lead to significant changes in discharges from a qualitative-quantitative point of view are subject to in-depth analysis **(Management of Change - MOC)**, such as any environmental incidents or out-of-specification parameters. In most cases,

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the instruments used to measure and report consumption consist of flow transmitters, used to issue year-end water bill (in case of municipal water system) or for the determination of annual charges based on volume of water consumed for industrial use (in case of withdrawal from artesian wells).

Nippon Gases pays particular attention to the use and impact on water resources, also considering the different levels of water stress to which the areas of its plants are exposed. According to the **Water Risk Atlas of the World Resources Institute**, the level of water stress changes from area to area, and it is ranges from low, as in the case of the Novara plant, to high, as in the case of some plants in central and southern Italy (Ravenna, Castelnuovo Berardenga, Rapolano Terme, Melito di Napoli, Modugno and Messina). The risk level of water stress is, on the other hand, medium-low or medium-high for all other manufacturing plants.

In sites where evaporative towers are in operation and where the water is used for washing equipment, the volumes of water are partly recirculated to reduce withdrawals. In some sites, the water procured from a municipal Consortium is stored in tanks for purposes of reuse and circular utilisation. At sites that use water in cooling systems, new water efficiency solutions have been implemented. More specifically, at the Ravenna plant, where there is a fractionation column (ASU), a 'Water Stress Management' project was launched in FYE2022 and throughout FYE2023 to reduce the water consumption of the cooling system by increasing the number of water cycles. Based on the significant results achieved since the start of the project (68,000 m^3 of water saved), feasibility studies are underway to implement the same type of solutions in other plants.

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Chapter 4

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Stronger thanks to our people

The highly skilled and experienced workforce is the foundation of Nippon Gases' success - a great company because it has a great team thanks to diversified and inclusive talent management,the Group achieves excellent business results while promoting the growth of its people.
Nippon Gases is committed to working with its customers, suppliers, employees, shareholders, and communities to understand how they can mutually benefit and **grow together**.
The technological solutions it provides enable industries to advance, and contribute to the betterment of communities through its activities, always in line with the principles of social responsibility.

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4.1 The workforce of Nippon Gases Italia

Nippon Gases Italia recognizes its employees' contributions, and the fundamental role they've played in achieving great results and success in its more than 100-year history.

Nippon Gases has always devoted great care and commitment to personnel management, ensuring a safe and stimulating work environment that encourages diversity, values talents, and builds relationships based on collaboration and transparency.

The company is a firm believer in quality, creativity, and the impact its work has on the world around it. It's proud of having workers focused on results, ready to push their limits and constantly looking for projects that respond to new challenges. Ensuring optimal health conditions and a completely safe working environment is an absolute priority for the Group. Nippon Gases rigorously implements the objectives set by the european Corporate, in full accordance with the vision and philosophy of Nippon Gases Europe, and fully respecting its guiding principles.

These principles are:

1. **Attract and engage the best talent**

Nippon Gases Italia has always looked to recruit the best talent for its team. The Group believes in the potential of future generations, and invests in highly-qualified young people by recruiting them directly from universities and providing training programs to introduce them to the professional world.

2. **Workforce retention**

To retain talent Nippon Gases provides a safe, stimulating work environment, **company welfare** policies and opportunities for personal and professional growth.

3. **Develop and improve leadership abilities**

For Nippon Gases, the development of people and their career paths is synonymous with business development. That's why the Company strives to offer quality **training programs**, asking its employees to invest time and energy into increasing their skills, fostering the emergence of tomorrow's leaders.

4. **Assign ambitious personal goals**

Nippon Gases has implemented a personal development plan that recognises and rewards the results achieved by each employee in line with the **company's performance**. This approach promotes a culture of continuous improvement and professional growth within the organisation.

5. **Promote diversity**

Diversity is one of Nippon Gases guiding principles, which the Company strives to promote each day, condemning all forms of discrimination. This commitment has led over the years to an increase in the number of high-profile female employees and the placement of young graduates with more technical competencies. The most notable achievement in FYE2024 was obtaining the **UNI PdR 125:2022** Certification for gender equality.

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6. Encourage community engagement
Nippon Gases believes it's important to create stable, long-term relationships with the communities in which it operates. Over the years, the Company has implemented numerous community engagement programs, from supporting local authorities to developing specific projects.

7. Support direct communication
For Nippon Gases direct, transparent communication forms the basis for long-term relationships. The company intranet and the implementation of the renewed European intranet, social media pages, website, and the invisibilemavero.it blog are valuable tools. Alongside daily dialogue and discussion, they help facilitate communication with the group.

8. **Promote work-life balance**
Nippon Gases Italia is committed to respecting employees' privacy and personal time, recognising that it is crucial for achieving optimal professional performance. This approach leads to more motivation and attention to occupational health and safety aspects as well. During FYE2024, the course **"Parents Being Born"** was introduced, focusing on work-life balance, integrating professional development with childcare, and managing personal time.

A new role has been introduced: the Ambassador

The Nippon Gases Group has consistently prioritised its people at the heart of its operations. Thanks to the professionalism, skills, **passion**, and **dedication** of its employees, Nippon Gases is able to create a stimulating and profitable work environment, which is essential for the company's long-term success.

In FYE2024, Nippon Gases introduced a new corporate role: the **Ambassador**. This award is given to individuals who, due to their journey within the company, their experience, and their authority, are seen as role models, guides, and key references for the entire organisation. Ambassadors are responsible for representing the company's **mission** and **values**, amplifying its messages and content, and providing valuable support to all colleagues. Additionally, they serve as a channel for gathering and relaying suggestions and ideas for improvement. The Ambassadors report functionally to the **Management Committee** and are regularly engaged in relevant discussions. They have the opportunity to interact with key stakeholders to develop effective solutions and create value for the company.

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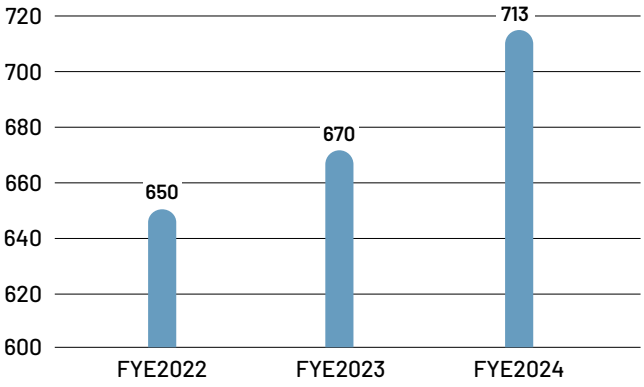
4.2 Working for Nippon Gases Italia

On 31st March 2024, the workforce of Nippon Gases Italia was composed of **713 employees**, **increased by 6%** over FYE2023. As in the year before, the number of company personnel does not include the employees of subsidiaries Home Medicine, Dryce, GemGas, and Nippon Gases Green Energy which, taken together, provide work for 58 people. Besides the 713 people hired on a permanent basis, at the end of the FY Nippon Gases Italia employed 33 **temporary workers** and 15 **apprentices**.

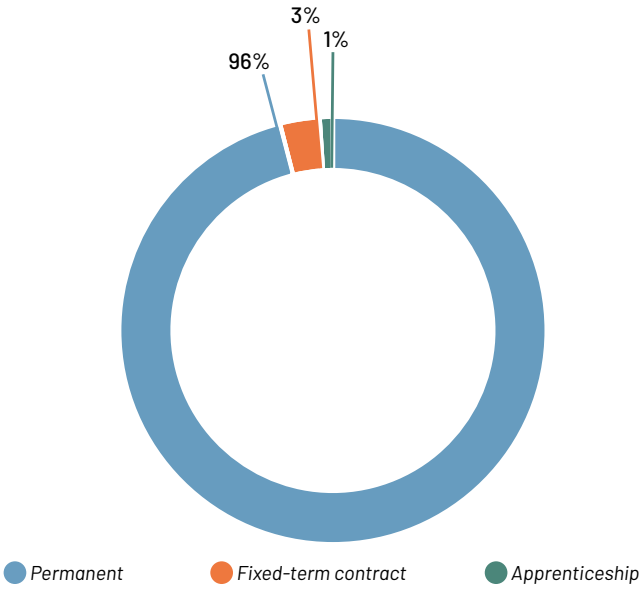
99% of employees have a **full-time contract**, 96% **permanent**, confirming Nippon Gases' commitment to creating stable jobs and lasting relationships with its personnel.

WORKFORCE

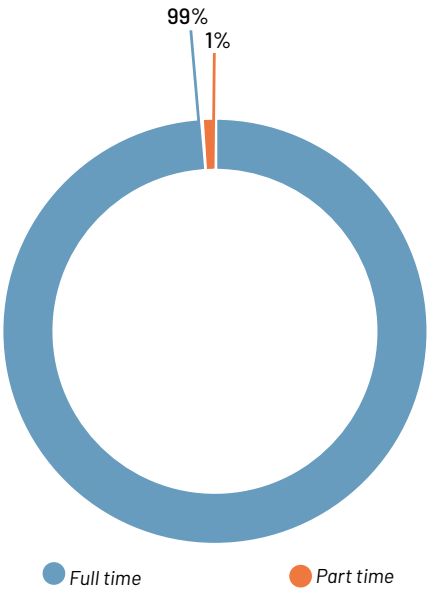


	F	M	HC
Dryce	10	26	**36**
GemGas	2	1	**3**
Home Medicine	9	9	**18**
Nippon Gases Green Energy	0	1	**1**

WORKFORCE BY TYPE OF EMPLOYMENT



WORKFORCE BY TYPE OF EMPLOYMENT



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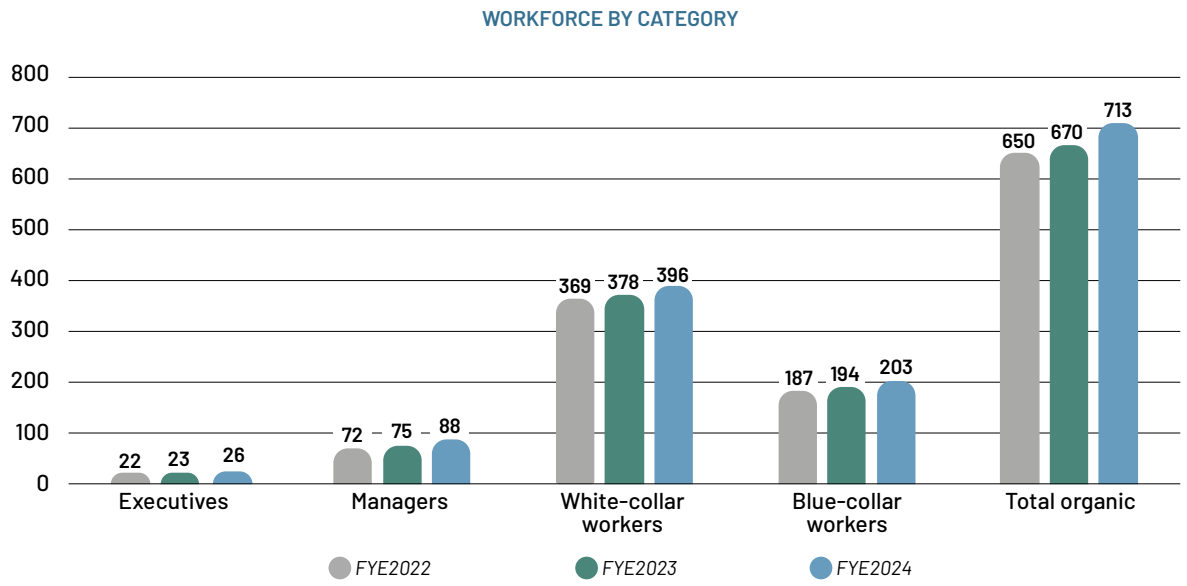
The majority of employees are **white-collar workers**, (55.5%), while the second largest category is **blue-collar workers** (28.5%). Both figures are broadly in line with the previous year.

Finally, **executives** and **managers** complete the workforce with 11.3% and 3.6% of the workforce respectively.



Around 26% of company employees are women, a value in line with the previous year. Nippon Gases believes that differences and diversities are strength elements to be promoted and valorised.

In FYE2024, the number of women in **managerial roles** increased, aligning with the Group's objectives and its commitment to achieving balanced gender representation within the organisation. With this in mind, the Group supports the **WING** network (an acronym for Women's Ikigai Nippon Gases) with a sponsorship programme. This is an example of Nippon Gases' actions to promote inclusion and gender balance and the development of women and their leadership skills within the company.

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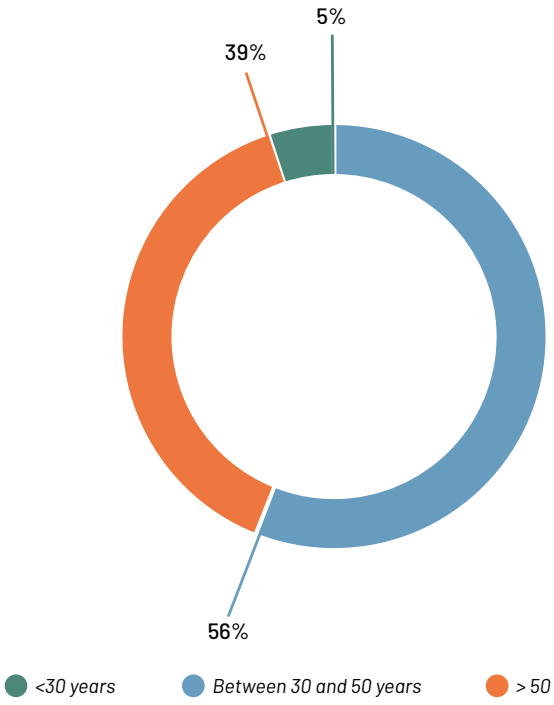
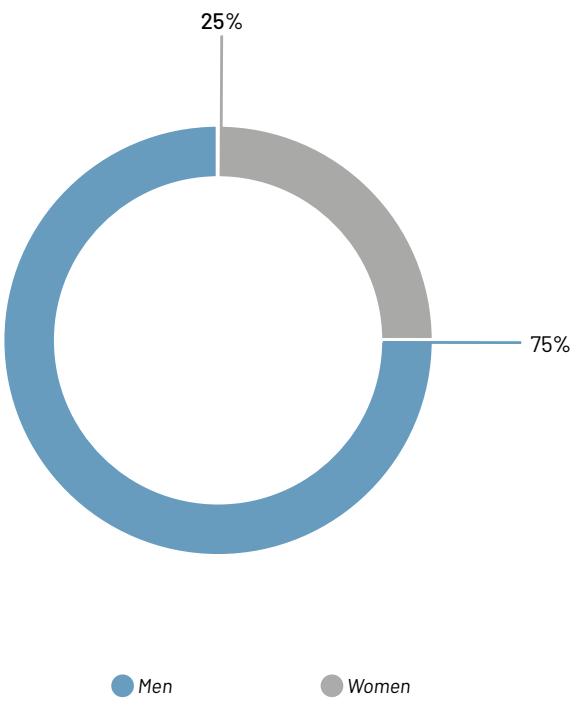
Nippon Gases promotes **career development** on the basis of merit and equal opportunities certifying talent within the organisation through specific programmes. Through a system of individual performance evaluation, the best results are recognised and promoted regardless of personal or gender characteristics.

EMPLOYEES BY AGE GROUP



STAFF BY GENDER



WING

The WING (Women's Ikigai Nippon Gases) project is a key initiative aimed at fostering a sustainable and inclusive corporate culture within Nippon Gases. Inspired by the Japanese concept of Ikigai, meaning "raison d'être," this network aims to promote a **balanced representation of men** and **women** at all levels within the company, combat **discrimination** through targeted actions, and enhance the quality of life for employees. Special focus is given to achieving gender balance and fostering the development of women's leadership skills. The WING Community actively supports women in their careers, raises awareness of gender challenges, fosters networking across different business areas, and advances changes aligned with Nippon Gases' diversity, equity, and inclusion goals. The Group will implement training programmes to raise awareness about **diversity** and **inclusiveness** establish mentoring initiatives, promote gender balance, and run dedicated awareness campaigns, all aimed at fostering a more inclusive corporate culture.

WING

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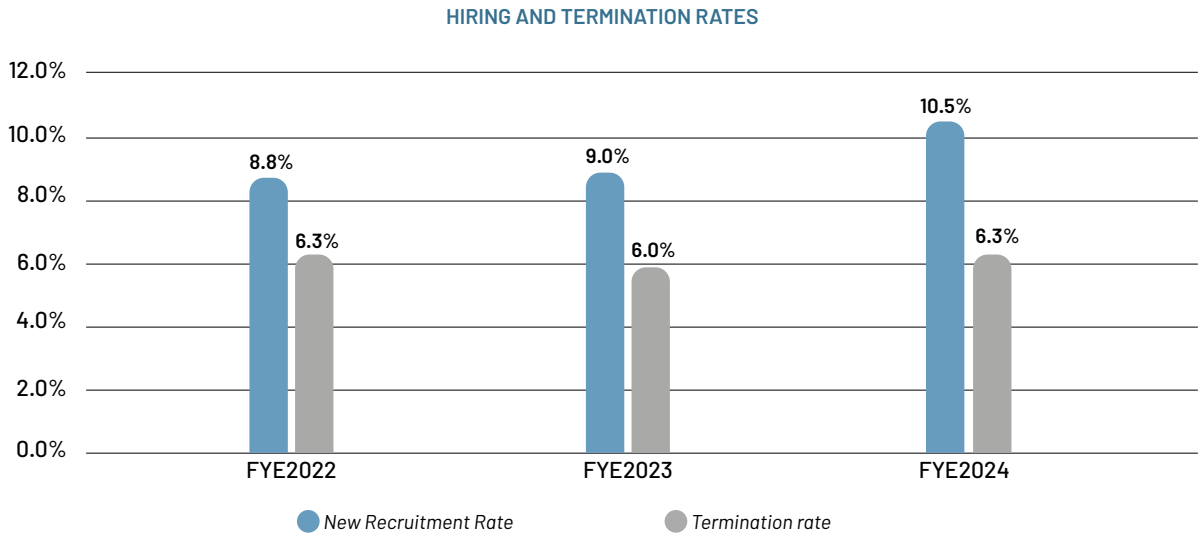
Nippon Gases personnel are also diversified by **age group**. As at 31st March 2024, 56% of company personnel are in the 30 to 50 age group, 39% are older than 50, and the remaining 5% are younger than 30.

FYE2024 was, ultimately, a year of **workforce growth**: 75 new employees, corresponding to a 10.5%[8] hiring rate. At the same time, 45 employees ended their employment relationships with Nippon Gases Italia, with a termination rate of 6.3%[9].



Nippon Gases is deeply committed to strengthening mutual trust with its staff through cross-functional initiatives and projects, valuing lasting and transparent relationships with employees as a key competitive advantage.

For younger employees, Nippon Gases offers a progressive vertical growth path, complemented by opportunities for horizontal development through diverse functional experiences. When possible, a professional development plan is provided to further enhance skills and knowledge.

In FYE2024, the **Onboarding & Induction project** was launched, a programme designed for the reception and orientation of **new employees**. This programme aims to streamline the integration of new hires by providing a structured pathway that introduces Nippon Gases' corporate culture, values, activities, and an overview of its products and services.

As part of a European initiative, the course features e-learning modules available on the **LMS People Hub platform**. These training modules are designed to help new employees understand the Group's ethics, values, philosophy, and vision, along with essential topics such as IT, compliance, security, and sustainability. This new digital approach aims to streamline and enhance the onboarding and induction process, highlighting Nippon Gases' commitment to advancing its human capital with cutting-edge tools and methodologies.

8 Rate determined as ratio between total number of newly hired and total number of employees at the end of the same accounting period

9 Rate determined as ratio between total number of terminations and total number of employees at the end of the same accounting period

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Another European-level initiative launched in FYE2024 is the **Community Young**, a network designed for young employees within the Group. This community fosters inter-company collaboration by connecting young employees, encouraging productive exchanges, learning opportunities, and both personal and professional growth.

In FYE2024, the European HR team continued to advance the **GOL ('Growing Our Leadership')** training and development programmes, building on the progress made in the previous year.

These programmes emphasise leadership skills and professional growth, engaging both junior and senior staff members. The primary goal is to cultivate and advance the top talent within the organisation.

Moreover, Nippon Gases Italia applies variable bonus schemes as a function company performance and the goals reached by each individual employee In this context, from FYE2020, a **performance management** programme, using the People Hub platform, takes into account both company goals and professional development goals, selected on the basis of role within the company and seniority. In FYE2024, 460 people participated in the programme, an increase of 11.65% compared to the previous year This is a European project adopted by the entire Nippon Gases group, which will continue to be gradually extended to the majority of the workforce.

The performance management makes it possible to define individual employee goals (Goal setting), which are reviewed with one's supervisor during two meetings conducted to discuss the progress status of the results during the course of the year. The competence development plan is designed to create personalized pathways for professional growth, aligning individual progress with company performance and annual bonuses.

This programme is especially valued for its transparency and effectiveness. Nippon Gases Italia believes that a positive work environment is essential for motivating employees and achieving corporate goals.

During FYE2024, all Group companies standardised the application of the **Collective Bargaining Agreement for the Chemical Industry** to all employees and extended the Second Level Agreement.

Moreover, from January 2019 of a company welfare platform was launched for all employees hired on a permanent or fixed-term contract for a period of at least 12 consecutive months and the creation of annual welfare accounts for individual employees, which employees can use according to their personal and family needs.

In conjunction with these updates, the **corporate welfare** plan was significantly enhanced and extended to cover all Group employees, underscoring the importance of employee well-being.

Another key welfare initiative confirmed in FYE2024 was the awarding of **scholarships to employees with outstanding children** who have excelled academically, from primary school through to master's level. A total of 140 students, including children and young people, were recognised for meeting the excellence criteria outlined in the 2022/2023 scholarship call. The total value of the awards amounted to approximately €36,000.

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It also highlights the Group's commitment to **smart working**, with 50.4% of employees having signed up for the program (69% if excluding professional categories that cannot participate due to their job nature), allowing for a total of 6 days of remote work per month. Smart working days are arranged independently, giving employees the flexibility to balance work and personal life while still meeting company objectives. The goal is to enhance individual responsibility and involvement, as well as strengthen the relationship of trust.

To foster greater employee involvement, initiatives were introduced to reward specific achievements and activities. These include: **Awards include the Best Salesperson of the Year, Best Productivity Project, Best Business Strategy Optimisation Result, and Best Assessment G Outcome.** Participation is voluntary, with employees applying on their own initiative, and winners are chosen by a committee.

The “Caring Company” network and the “Parents who are born” programme.

In FYE2024, Nippon Gases joined the **Caring Company** network, a consortium of Italian companies committed to fostering workplaces that enhance employee well-being and professional growth. These companies prioritise work-life balance and recognize the potential of individual talents.

Riccarda Zezza, CEO of Lifeed and founder of the network, commends these companies for their dedication to enhancing the work environment and valuing diversity.

One of the key initiatives of the Caring Company is the **"Parents who are born"** programme, designed to help new parents balance personal and professional life while enhancing their interpersonal and organisational skills.

In FYE2024, Nippon Gases introduced the "Parents who are born" initiative, engaging 15 new parents and attracting 146 participants to its webinars. The programme helped participants enhance their time management, self-awareness and organisational skills.

At Nippon Gases, private roles constitute **70%** of all employee roles, while professional roles make up **25%**. The programme emphasised personal talents like affection, emotionality, and reflection, positively impacting both private and professional spheres. Nippon Gases intends to repeat and expand the initiative in the coming year, reaffirming its commitment as a Caring Company to fostering the well-being and development of its employees.

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FYE2023 Awards presented

In July 2023, for the third consecutive year, the Executive Board recognised employees who excelled in various areas during FYE2023: Sales, Pricing, Competitiveness and Internal Assessment. The prestigious awards were presented to the following recipients:

- **Fabio Banzato**
  PAG Sales Specialist (Milan), received the "Best Salesperson of the Year Award" for exemplifying exceptional customer care, a drive for growth, and the creation of new value for both Nippon Gases and its clients.

- **Roberto Celeghin**Bulk Sales Leader (Brugine), was honored with the Value Award—an exceptional accolade introduced by Nippon Gases Italia in FYE2023 to acknowledge outstanding dedication to customer care.

- **Marco Frinolli Puzzilli**, Bulk Production and Bulk Operational Excellence Manager, received the "Best Productivity Project Award.". The project was acknowledged for its exceptional achievement in meeting objectives, both quantitatively in terms of energy savings and qualitatively through its high level of innovation, automation, and potential for transformative impact.

- **Andrea Sandon**, Package Production Manager and **Stefano Boggio**, Specialty and Pure Gases Production Manager, received the "Award for the Best Outcome of Assessment G" on behalf of the Operations Package team from Chivasso. This award recognizes their adherence to operational discipline, commitment to safety, and continuous improvement within budget constraints.

Also confirmed was the **"Best Employee of the Year"** award, now in its second edition, which in FYE2024 went to **Igor Grandi**, Plant Coordinator at the refrigerant gas production plant in Alessandria, Italy. The prize is awarded to employees who have particularly excelled in professional dedication, initiative, reliability and competence. The key criteria assessed include personal values, performance, availability and commitment. The theme chosen was "collaboration," a quality for which Igor Grandi was widely recognised by his colleagues. They voted for him via the digital platform, leading to his nomination.

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4.3 Nippon Gases Italia's communication

Communication within the organisation is designed to reinforce employees' sense of belonging to the Nippon Gases Group and enhance their awareness of their individual roles in achieving the company's objectives.

The **internal communication plan** aims to build employee confidence in company policies and strategies by clearly conveying the company's identity and values. The Group utilises various tools and channels to inform and engage employees in corporate life and initiatives.

The goal of internal communication is to promote the dissemination and sharing of information, encourage collaboration, and foster the free exchange of ideas and innovation.

Regarding internal communication, the integration process that began last year was completed in FYE2024, with all local intranet content from **WeShare** being transferred to the Nippon Gases Europe Group intranet, **WeConnect**. The goal is to enhance the employee experience by sharing information and initiatives of common interest across the entire Group. This includes promoting the exchange of projects, values, business successes, results, events, and corporate objectives on both a local and global scale. In FYE2024, over 150 articles were published on the intranet, covering topics such as people and business news, Group achievements and ongoing projects.

Sharing information via the intranet contributes to the cohesion of the Nippon Gases Group, facilitating change and continuous improvement internally. It also strengthens awareness of key corporate issues such as security and compliance.

At special events and announcements, video calls are held regularly to discuss strategic topics with employees across all Nippon Gases locations and plants.

In addition to WeConnect, the **Internal Communication Team**, part of Corporate Communication, utilises several other channels to share information, including:

- **KONNICHIWA EUROPE** is quarterly magazine for all employees of the Nippon Gases Europe Group, produced in collaboration with the local communications teams, which explores specific topics, provides ample space for interviews with top management and highlights important projects.
- **KONNICHIWA FOR LEADERS** is a monthly digital publication for executives and managers and its articles are aimed at strengthening leadership.
- **KONNICHIWA NSHD**, the NSHD Group's quarterly digital magazine, offers an overview of global events.
- **LEADERSHIP WEBINAR** are quarterly sessions for all staff where European Group managers share their experiences on various topics.
- **TECH TALKS** are 45-minute technical webinars. They are managed by in-house personnel, designed to share and disseminate knowledge about the gases industry and the company's most technological topics in general.
- **TELECONFERENCE** is a quarterly update for all European employees, where the President of the European Holding and Top Management share updates on various aspects of the company's performance, including Safety, Quality, Sustainability, Finance, and Compliance.
- The **ONBOARDING WEBINAR** is a quarterly initiative developed in collaboration with the HR Europe team. It is primarily aimed at new recruits but is also open to all employees interested in learning more about the Group.

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Internal communication not only reinforces corporate culture and conveys information but also seeks to engage staff through various initiatives. To encourage collaboration among employees, Nippon Gases organized **team-building events and activities** throughout the year, which sparked great enthusiasm among the participants.

In FYE2024, Nippon Gases renewed its loyalty project in collaboration with Treedom, as part of its external communication strategy to raise awareness and engage customers on sustainability issues. The contract with Treedom includes planting **500 trees annually for 5 years**, with an estimated impact of absorbing nearly 111 tonnes of CO_2 over 10 years. This year, the Nippon Gases forest reached **1,500 trees**, thanks in part to the support of its customers. This initiative not only supports the environment but also contributes to 10 of the 17 Sustainable Development Goals (SDGs) set by the United Nations for 2030, highlighting Nippon Gases' concrete commitment to global sustainability.

For example:

- in December, the **Christmas** Raffle, now in its third year, was held, offering 30 travel vouchers as prizes to all participating employees;
- on **World No Tobacco Day**, established by the World Health Organization on May 31st, Nippon Gases reaffirmed its commitment to employee health. This commitment reflects the company's core values of sustainability and environmental protection. The company has chosen to actively support the *"No Tobacco Day"* campaign with a new initiative aimed at raising awareness about the dangers of tobacco and assisting smokers in their efforts to quit. The initiative includes awarding prizes to employees who successfully quit smoking with the help of a dedicated coaching program.
- In October 2023, on the occasion of **World Mental Health Day**, Nippon Gases organised the webinar "Mental Wellbeing through Care." This event engaged employees in exploring psychological wellbeing and enhancing self-awareness. Nippon Gases remains committed to combating all forms of prejudice and underscores the vital importance of employee psychological well-being. The company strives to create an actively inclusive work environment, ensuring that everyone has social support and feels comfortable discussing mental health issues with colleagues, managers or HR.

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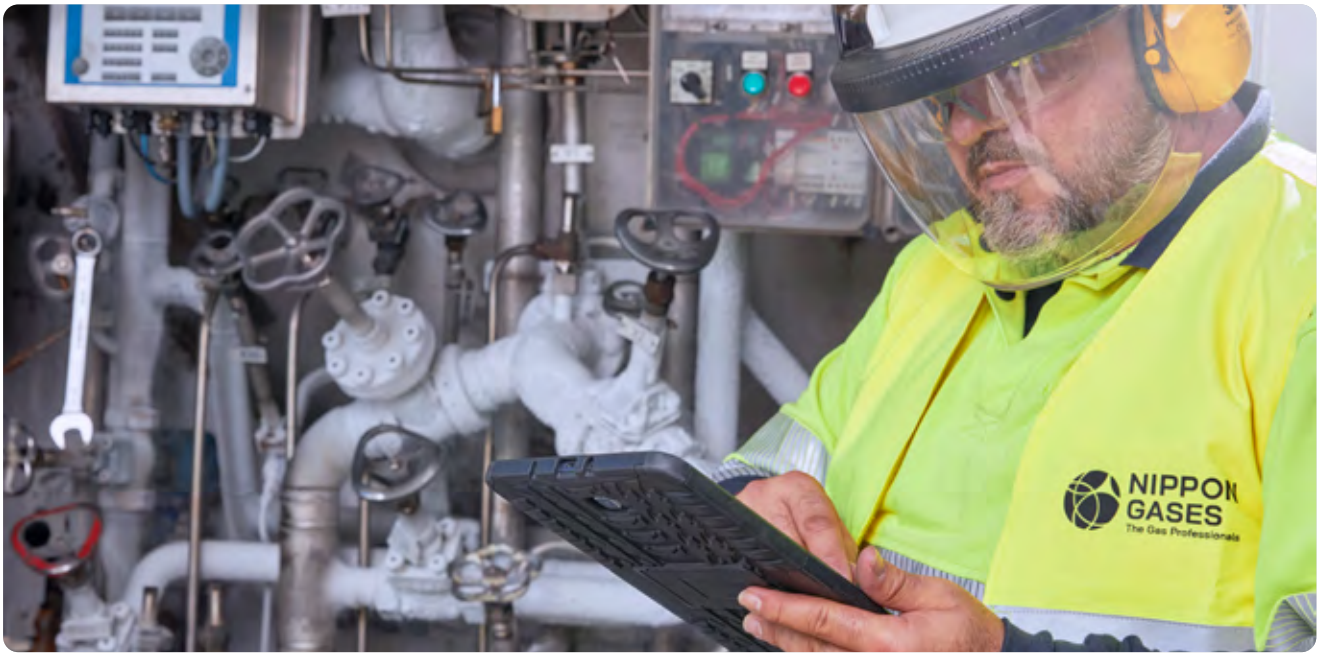
During FYE2024, several **paperless initiatives** were launched to digitise processes and reduce paper usage. The project includes several changes, such as using recycled paper, reducing the number of printers, and replacing inkjet printers with new laser models. These changes aim to significantly cut energy consumption and CO_2 emissions. The **Printers Renewal project** aims to reduce energy consumption by 129,806 kWh (25,960 kWh per year) and cut CO_2 emissions by 68,788 kg (13,758 kg per year) over the next five years. Finally, the new **Follow Me** badge printing system has been implemented across Europe, enhancing information security and raising staff awareness to reduce print volume and paper waste.

Nippon Gases Italia is also adopting a **paperless** approach to external communication, aiming to cut down on the use of printed catalogs and materials. During FYE2024, the company introduced QR codes at events and trade fairs, allowing participants to register and download catalogs digitally.

Additionally, an agreement was made with a supplier to prioritise FSC-certified paper and eliminate the use of laminated paper. In March 2024, the company began distributing digital business cards, reducing the need for printed paper cards.

The Simplification Committee

During FYE2024, the Management Committee established the Simplification Committee to optimise business procedures and processes. The task is to analyse and review working methods, procedures, operational cycles, and tools to ensure that company objectives are met more simply, effectively and efficiently. The committee will also gather reports from the organisation to identify and address problems, inefficiencies, and redundancies that hinder productivity. Simplification projects will be categorized by duration: short-term projects (up to 3 months) and medium-term projects (6-9 months). The initiative aims to enhance time management and work organisation by encouraging staff to identify potential improvements in their areas of work.



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4.4 Training at Nippon Gases Italia

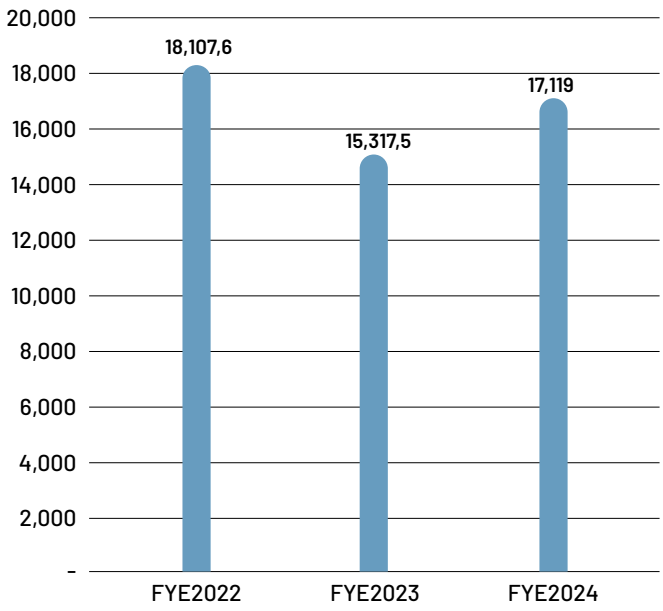
In FYE2024, Nippon Gases strengthened its commitment to employee empowerment and development through several strategic initiatives. **Continuous training** is a key pillar, featuring customised sessions tailored to specific needs identified through dedicated interviews and active support from business function managers. To achieve this, the **People Hub** platform, already utilised by the entire European Group for performance management, was implemented to broaden the range of training available to all employees.

During FYE, a total of **17,119 training hours** were provided, averaging about 24 hours per employee. These figures mark a significant increase from the previous year, highlighting Nippon Gases' growing commitment to investing in its employees.

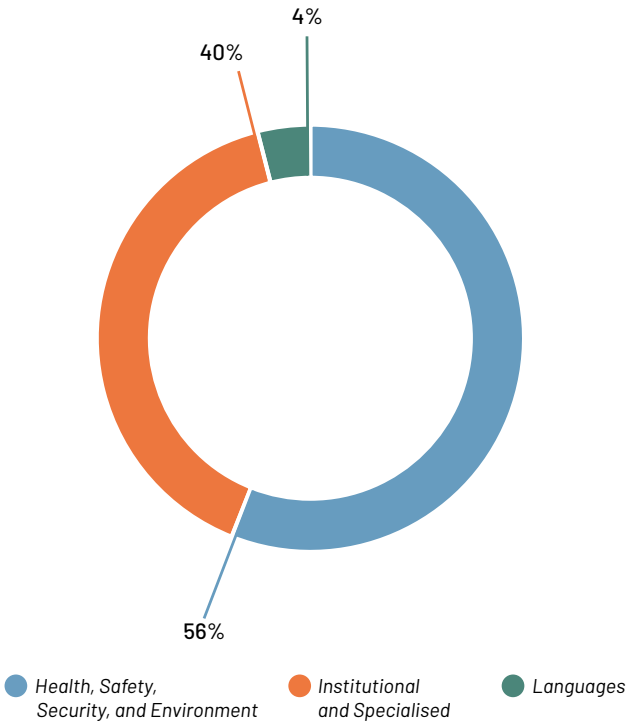
Among the various training initiatives, those focused on **health** and **safety** were the most prominent, accounting for about 56% of the total training hours. This commitment reflects the Group's ongoing focus on occupational safety, with a belief that strict adherence to internal procedures and continuous training are crucial for achieving positive safety outcomes.

The safety training program, developed in collaboration between **HSE** and **Human Resources,** includes specialised sessions and regular updates for all personnel, in compliance with current regulations. This integrated approach not only enhances operational skills but also fosters a conscious and responsible corporate culture.

TOTAL HOURS OF TRAINING



BREAKDOWN OF TRAINING HOURS FYE2024



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40% of the training hours administered are devoted to institutional and specialist topics.

The first category includes training on compliance and organisational models, quality, and Nippon Gases product technologies.

The second type is initiated by employees and focuses on specific topics or professional development needs.

The last category, 4% of total training hours, concerns language courses.

To foster a training environment that supports employee professional growth, Nippon Gases Italia also participated in the European programmes **GOL I** and **GOL II (Growing Our Leadership)** during FYE2024.

During FYE2024, as part of GOL I, the HR Europe team hosted 31 young employees from across the region for a three-day training course. The program covered topics such as leveraging personal strengths, building relationships, developing strategic decision-making abilities, and fostering adaptability. The training also included interactive activities designed to enhance team-building skills.

During FYE2024, **GOL II**, the second module of the training and professional development programme, was also held. This course targeted managers from across the organisation, bringing them together in regional teams to develop productivity projects aimed at enhancing the company's performance.

A committee of European directors selected six candidate projects deemed to have the greatest impact on the organisation.

The finalist teams were honored at a special international session in Benidorm, near Alicante, Spain.

The winning projects in this edition were the **Omnichannel Customer Experience**(OCX) project, submitted by the Italian team, the **Microbulk CO_2** project, and the **Rental Tank Fees Optimisation** project.

The best projects of the FYE2024 program were awarded to the winners of GOL II: Growing Our Leadership

— **3rd place**: the Italian team with the *Omnichannel Customer Experience (OCX) project.*

The team consisted of:
- **Giuseppe Polverino**
  Customer Innovation Experience Manager
- **Giuseppe Greco**
  Customer Service Manager
- **Mario Secco**
  Credit Manager
- **Alessandro Tolotti**
  Planning & Dispatching Process Manager

— **2nd place**: the BNF team with *The Microbulk CO_2 project.*

— **1st place**: the Iberia team with the *Rental Tank Fees Optimisation project.*

Nippon Gases Italia is proud to have had Italian employees represent us in one of the projects that reached the final podium.

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4.5 Health and safety: priority for Nippon Gases Italia

At Nippon Gases, safeguarding employee health and safety is a top priority and essential to all company activities.

This commitment involves strict adherence to current legislation, internal Group Health and Safety policies, and the voluntary adoption of the **ISO 45001:2018** standard. Nippon Gases is committed to ensuring a safe working environment by analysing and minimising risks, investing in ongoing training, and acquiring new equipment. Additionally, it closely monitors adherence to proper operational practices in line with strict company procedures.

The **Health, Safety, and Environment (HSE)** team collaborates closely with Management and Functional Managers to plan health and safety activities, defining roles and responsibilities in compliance with Legislative Decree 81/08, the applicable regulations, ISO 45001 and company policies. HSE also identifies the training and information needs of the employees and provides support to the Procurement Office and the operational functions with the qualifications of contractors from the standpoint of Safety and Environment.

In line with the company's Health, Safety, and Environment policy, Nippon Gases emphasizes the importance of providing comprehensive, specific training on these matters to all employees and workers. This training not only meets legal requirements but also covers additional content and complementary topics that align with voluntary standards, Nippon Gases Europe criteria, and specific training programmes.

The **Prevention and Protection Service** at Nippon Gases Italia is an internal Group department and includes two Prevention and Protection Service Managers (RSPP) and five Prevention and Protection Service Coordinators (ASPP). Also working in this connection are 20 Workers' Representative for Safety (RLS) and more than 300 people in charge of first aid and emergency response over the entire national territory. Every quarter, Nippon Gases engages all plant and operations staff in safety meetings to discuss several key topics. These topics include risks and protective measures, emergency management, proper use of PPE (Personal Protective Equipment), recent significant accidents in the industry, and specific safety programmes developed by Nippon Gases.

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THE SAFETY EXCELLENCE JOURNEY

In FYE2024, Nippon Gases is celebrating the 5th anniversary of the Safety Excellence Journey (SEJ) initiative. The most recent edition focused on the theme **"Safety Culture: One Goal, Many Actions."**.

Nippon Gases' safety culture and management are founded on leadership and four key areas:

- employee health, which includes physical, mental, emotional and social well-being;
- personnel safety, emphasising high-risk activities and hazard management;
- process safety, focusing on understanding production and storage hazards;
- distribution security, which ensures the safe delivery of products to customers by integrating technology, training, and human factors to minimise incidents.

Nippon Gases remains committed to employee health through various training initiatives, such as proper lifting techniques, and regular medical examinations based on job type.

The Safety Excellence Journey initiative highlighted the critical role of Health and Safety in the company's success and underscored the importance of everyone's role in promoting and adhering to company policies in this area.

Affirming its longstanding commitment to the Health and Safety of employees, suppliers, customers, and collaborators, the Group has a team of experts who assess **potential environmental, health, and safety risks** associated with each new product. They analyse the entire product life cycle and evaluate any technical risks related to the product or service to ensure Nippon Gases' quality standards are met.

FYE2024 Nippon Gases continued to use the system to remotely monitor operators during the unloading of tanks at its customers' premises. The system, called **"Remote Job Safety Observations",** awarded the European Industrial Gases Association (EIGA) Safety Innovation Award for the year 2022, involves the application of the same technology used in customer service, in the area of job safety. Thanks to this innovative method, with the committed collaboration of the personnel involved, all unloading operations carried out at the site can be observed remotely, using appropriate devices in order to verify compliance with the standards defined by the group. Observers can thus remotely complete the traditional security checklist, to verify that the correct security procedures are followed.

The Group monitors continuously and keeps track of near miss events and accidents associated with its products and services which are always followed by targeted actions to prevent their recurrence. During the reporting period, two workplace accidents involving employees were recorded, resulting in an accident rate of 1.58 per hours worked. This represents an improvement from the previous fiscal year's rate of 1.69, underscoring Nippon Gases Italia's strong commitment to health and safety. On the other hand, no injuries were reported for workers not employed by Nippon Gases.

Besides its own facilities, Nippon Gases takes into consideration the external context where their are and the surrounding reality, for purposes of risk assessment and management of emergencies.

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In particular, for the plants that come under the scope of Legislative Decree 105/2015[10] Nippon Gases handles public information communication through the **ISPRA** portal during Notification submissions and actively collaborates with relevant agencies to develop, update, and conduct exercises for the **External Emergency Plans** (EEPs). To address emergencies involving the release of toxic gases, the Group has trained a dedicated team of employees and equipped them with the necessary tools to ensure swift and effective intervention nationwide.

In October 2023, the 17th edition of **Le Settimane della Sicurezza**, an important annual initiative promoting workplace Health and Safety, took place in Frosinone. The campaign engages high school students and students from La Sapienza University of Rome who are studying Prevention Techniques in the Environment and Workplaces.

The young participants have the chance to explore various companies at the stands and attend seminars led by security professionals. Nippon Gases participated in the initiative by setting up an exhibition space and organising a visit to the Anagni site, showcasing the Group's commitment to worker health and safety. The event represents a collaborative effort among government agencies, educational institutions, professional organisations, companies, and trade unions to promote workplace safety.

Transport security is vital for Nippon Gases due to its extensive network of customers. The company remains committed to investing significantly in driver training.

All distribution vehicles are equipped with advanced systems for vehicle stability control and driving data monitoring. Each vehicle is fitted with **Mix Telematics**equipment, which enables monitoring of drivers' driving styles.

This initiative aims to improve driving safety and help the company achieve its goal of zero accidents and zero injuries. The following are monitored:

- Critical speed: > 87 km/h
- Abrupt acceleration: > 10 km/h/s
- Abrupt deceleration: > 19 km/h/s
- Side acceleration: > 0.3 g
- RSS (Roll Stability Support) activation: Yes/no

10 *On 26th June 2015, with the enactment of Legislative Decree No. 105, Italy implemented Directive 2012/18/EU (so-called "Seveso III"), concerning the control of major-accident hazards involving dangerous substances.*

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All the data are analysed periodically and, when the need arises, ad hoc improvement plans and targeted training sessions for the drivers are organised.

In addition, Nippon Gases has equipped its entire transport vehicle fleet with frontal cameras installed in the driver's cab and facing the road. These enable the monitoring, control and validation of drivers' driving performance. The aim is to improve safety performance by sensitising drivers to pay more attention while driving and thus reduce potentially dangerous situations.

This system guarantees the respect of the drivers' privacy. In fact, the camera is oriented towards the road, not the driver's seat, and is only active for video, not audio, filming, and was authorised from the transport companies, which involved both the drivers and the trade unions for this project. In addition, means of gas transport are also equipped with rear cameras to check the stowage and tensioning conditions of the load.

Finally, within the Group's activities, Safety in the **Transport of Dangerous Goods** plays a particularly important role. The subject is governed by the **ADR** (European Agreement concerning the International Carriage of Dangerous Goods by Road) regulation, which is updated every two years. The most recent revision took effect on July 1st, 2023. Nippon Gases regularly provides e-learning training for personnel involved in loading and unloading, handling, and preparing documentation for the transport of dangerous goods.

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SAFETY IN PRODUCTION, TRANSPORT AND USE OF HYDROGEN

On June 22nd, 2023, Nippon Gases took part in the Study Days on 'Hydrogen from Renewable Sources and its Derivatives,' organised by ADIC (the Italian Association of Chemical Engineering), the University of L'Aquila, the Fire Brigade, and the Order of Engineers of Chieti.

During the event, the Safety, Health & Environment Leader delivered a speech on safety in the production, transport, and use of hydrogen. The talk focused on safety concerns related to handling gases, equipment, instrumentation, and facilities involved. Additionally, there are direct hazards related to the substance itself and indirect hazards arising from wear and tear, as well as mechanical, thermal, and chemical stresses in the use, transport, and storage facilities. Nippon Gases specialises in the production, storage, and transport of hydrogen, adhering to stringent safety principles throughout all stages of the process. This involves hazard evaluations using **HAZOP (Hazard and Operability)**, **HAZID** (Hazard Identification), and **FMEA** (Failure Mode and Effects Analysis) methodologies, ensuring personnel safety, operational discipline, and effective emergency response management. Material selection and maintenance procedures are tailored to hydrogen's unique properties, addressing risks such as brittleness and thermal fatigue. Hydrogen storage options include high-pressure gas containment and cryogenic liquid storage, while transport methods range from pressurised containers and cryogenic transports to pipelines, each with its own set of risks and regulations. Nippon Gases' plants are meticulously designed with attention to layout and safety clearances, including emergency protocols for handling hydrogen combustion fires and preventing leaks. The company operates in accordance with European directives, including the ATEX directive for explosive atmospheres, pressure equipment directives, and safety regulations for hydrogen distribution systems. The Group's dedication to safety, environmental stewardship, and regulatory compliance is integral to its operational excellence and enduring success in the industry.

In June 2023, Nippon Gases organised a **training initiative for agencies** focused on workplace safety. The topics covered included fundamental safety concepts such as danger, risk, and damage; the use of personal protective equipment (PPE); prevention, protection, and safety measures; the importance of risk assessment; and the proper allocation of roles and responsibilities as outlined in Consolidation Act 81/2008.

During the event, recent accidents were analysed to identify their causes, highlighting the critical importance of operational experience for ongoing safety improvements.

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4.6 Suppliers: an important component of the team

To ensure the effectiveness of the **supply chain**, all Nippon Gases suppliers are qualified and registered in the supplier portal. This system is essential for:

- streamline the qualification process;
- simplify the evaluation of non-conformities through the portal;
- enhance communication with suppliers;
- optimise the administrative management of documentation.

Each supplier is required to ensure the same level of commitment and conduct required of Nippon Gases employees. To be included on the Nippon Gases vendor list, potential suppliers must register on the **portal** by completing the Safety, Environment, and Compliance questionnaires, filling out the Administrative section, and uploading the required documents and certifications. After the Purchasing team and other relevant teams verify and approve the documentation, the qualification process and subsequent coding are completed.

All the questionnaires and the documents uploaded to the portal must be updated periodically to maintain the approval obtained. The suppliers are also required to sign the **General Conditions of Contract Nippon Gases**. All suppliers are regularly monitored and evaluated by taking into account aspects such as quality of the products/services supplied, environmental impact, safety performance.

During FYE2024, the implementation of the European **Zycus** platform for supplier management and evaluation, which will replace the current supplier portal, continued. Zycus handles the vendor list and offers various modules for integrated supplier management. During FYE2024, the **I-supplier form** for coding and qualification was activated. This form allows suppliers to directly enter their data and accept the Group's Code of Conduct via a provided link.

The platform is utilized across Nippon Gases Europe and facilitates the transcoding of suppliers between countries. Another module currently being implemented is **iRisk**, which streamlines and digitises the manual processes used by the purchasing team to evaluate suppliers and standardise supplier management across Europe. This module allows you to assign a **score to a supplier**, monitor it and keep it active in the supplier list. In addition, the iRisk module provides the ability to survey suppliers by creating ad hoc questionnaires on specific topics. Through the same module, surveys are carried out to meet ISO27001 for IT security management.

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The **Zycus** platform allows suppliers to be selected, not only on Safety and Quality performance, but also on environmental and social aspects. During FYE2024, two specific questionnaires for **SA8000** (Social Accountability) and **ISO37001** (Management System for the Prevention of Corruption) were activated.

The six stages of the procurement process of Nippon Gases:

1. Purchase request
2. Supplier selection and negotiation
3. Purchase order issuance
4. Product/service receipt
5. Supplier invoice/purchase order pairing
6. Payment

Given the capillarity of the customers served by Nippon Gases and the plants located in the country, the Group has paid more attention in recent years to using local suppliers (68.4% of expenditure in FYE2024 was with Italian suppliers), which allows it to offer a more flexible service, reducing costs and the environmental impact generated.

The procurement chain of Nippon Gases is extensive and diversified. Electricity and services, as well as other producers on which the Group relies to extend its product range, are the main expenditures.

Transporters are another major category of suppliers, who, together with agents, play a primary role in distributing the gas along the entire Italian Peninsula.

Then come the suppliers from whom Nippon Gases buys the best advanced equipment to be able to supply top quality products and services. A special mention has to be made of maintenance technicians and Customer Service suppliers the former offer services to the entire organisation and the latter provide specific support to the Customer Service function with services consisting primarily of extraordinary maintenance and installation works.

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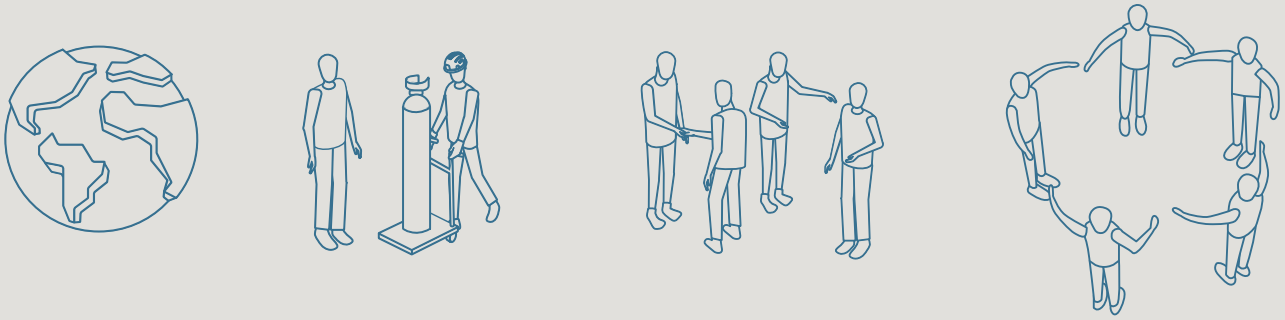
The planet
The customer
Our people
The community



Nippon Gases believes that an innovative, responsible and sustainable organisation can significantly contribute to society.

This principle guides the Group in promoting initiatives, both in its in-house and customer-facing operations, encouraging the commitment of all employees to improve their sustainability impact.

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4.7.1 The planet

NIPPON GASES ITALIA AND IREN AMBIENTE JOIN FORCES FOR THE VALORISATION OF BIOGENIC CARBON DIOXIDE

Nippon Gases Italia has signed an important cooperation agreement with **IREN Ambiente** for the management and marketing of biogenic CO_2 after purification and liquefaction, obtained from the anaerobic digestion of the differentiated organic fraction, carried out at the new **FORSU** (Organic Fraction of Solid Urban Waste) plant in Gavassa (RE).

The FORSU plant at IREN Ambiente produces **compost, biomethane**, and **CO_2** from the separated organic fraction of food waste. It meets the highest quality standards for purity and reliability of carbon dioxide required by the food market.

The Biogas produced at the plant is upgraded to biomethane through a membrane process, enabling the supply of **entirely renewable, zero-impact energy** to the grid. Downstream of the **Gavassa plant**, a biogenic carbon dioxide recovery and valorisation system has been installed. This innovative process purifies and liquefies CO_2 to meet the quality standards required by the food and beverage sector.

This successful agreement not only maximises the value of the 'zero-impact' CO_2 produced by the plant but also leverages Nippon Gases' extensive experience in the production and **marketing of food-grade gases**. Nippon Gases will provide IREN Ambiente with the support and consultancy needed to secure health authorisations and certifications for the new site. Nippon Gases also provides **training** for IREN Ambiente personnel to become certified food additive gas operators and offers **consultancy** for developing proper procedures for tank loading, defining production batches, and issuing the necessary certificates of analysis.

"We are thrilled to be part of this significant project, which exemplifies the circular economy and bolsters our leadership in the carbon dioxide and dry ice market. The biogenic CO_2 produced by IREN Ambiente's zero-impact plant represents a tangible contribution to sustainability and the preservation of our planet," says **Davis Reginato, General Manager of Nippon Gases Industrial**.

"This agreement," says **Eugenio Bertolini, CEO of Iren Ambiente** "is part of *IREN'S* broader commitment to maximising the sustainable and circular use of resources. *Food residues and pruning clippings, rather than being a problem, are transformed into valuable resources. In addition to producing biomethane and high-quality compost, the FORSU plant also generates high-purity technical and food-grade CO_2, which is now being valorised through our agreement with NIPPON GASES. Our goal is to create shared value through a genuine circular economy, using plants like the one in Gavassa to address the needs of people, the economy, the environment, and the local community."*

This collaboration underscores Nippon Gases and IREN Ambiente's commitment to advancing sustainable practices and **innovating in waste treatment** and renewable energy production.

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THE AGREEMENT BETWEEN NIPPON GASES OPERATIONS AND ENEL GREEN POWER ITALY FOCUSES ON THE VALORISATION OF CO_2 NATURALLY PRESENT IN GEOTHERMAL FLUIDS.

Enel Green Power Italia and Nippon Gases Operations signed an agreement for the construction of a new plant for the recovery, purification, and liquefaction for food purposes of CO_2 naturally present in the geothermal fluids of the Piancastagnaio plants, in the province of Siena.

Enel Green Power will provide the geothermal fluid leaving the plant to enable Nippon Gases to reuse Carbon Dioxide of natural origin, thanks to an innovative process that also involves the purification and liquefaction using the best technologies available on the market. The new Piancastagnaio plant, which will be powered entirely by renewable sources, will ensure compliance with the most stringent quality specifications for purity and reliability of CO_2 required by the food, beverage, and pharmaceutical markets. The amount of "green", CO_2 reused by this circular economy project is equivalent to around 30% of the national demand for "pure" Carbon Dioxide.

Nippon Gases Italia is thrilled to be involved in this important project, which enhances its leadership in the **carbon dioxide** and **dry ice** markets. The high reliability of Enel Green Power Italia's plants, coupled with advanced gas purification techniques and the use of natural products, will enhance our services while upholding environmental respect and **sustainability**-core values of Nippon Gases' business.

This significant investment is part of a series of initiatives by the Nippon Gases Group to boost production capacity, enhance competitiveness, and improve customer proximity in Italy, all with a focus on sustainable growth.

THE NEW BIOGAS INITIATIVES: NIPPON GASES INDUSTRIAL IS A GOLD SPONSOR OF THE FARMING TOUR 2023.

Nippon Gases Industrial, as a gold sponsor, took part in the series of events organised by **CIB - Consorzio Italiano Biogas**, known as **"Farming Tour 2023: The new initiatives of Biogas**. The tour, held from April to September 2023, was a four-stage journey across Piedmont, Lombardy, Friuli-Venezia Giulia, and Emilia-Romagna, showcasing exemplary farms in the biogas sector.

Farming Tour 2023provided Nippon Gases with the opportunity to showcase industry applications and discuss future goals for **renewable energy** production from agriculture. It also highlighted actions to address the **climate challenge** by focusing on decarbonisation and reducing emissions through more efficient resource use. The first stage of the tour took place in April in Candiolo at **Cooperativa Agricola Speranza**, home to Italy's first agricultural plant for producing liquefied biomethane with biogenic carbon dioxide recovery.

The second stage was held in May in Lombardy, at **Società Agricola Palazzetto** in Grumello Cremonese (CR). The third and fourth stages occurred in June and September, respectively, in Friuli-Venezia Giulia and Emilia-Romagna. The visits were to **Società Agricola Principi** di Porcia in Azzano Decimo (PN) and **Cooperativa Agricola Il Raccolto** in Bentivoglio (BO).

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HYDROGEN EXPERIENCE: A DAY DEDICATED TO HYDROGEN AT THE VAIRANO AUTODROME

On June 12th, 2023, an important event titled "Hydrogen Experience" was held at the **ASC Automotive Safety Centre in Vairano** (PV). Organized by Assogastecnici's Hydrogen Energy Carrier Group **(GIVE)** with support from Federchimica, the event focused entirely on hydrogen as an energy carrier and related technologies. It was a key event designed to foster discussion among major industry players, aiming to achieve economies of scale, advance the supply chain, and promote the sustainable use of hydrogen in the energy sector.

The day featured a comprehensive programme that included detailed discussions alongside hands-on experiences.

In the morning, the **conference** took the form of a talk show, providing institutional representatives, experts, companies, associations, and both public and private organisations with a platform to discuss the challenges and opportunities of hydrogen as an energy vector. Among the round table speakers was **Massimiliano Antonini, Managing Director of Hysytech**, who shared the company's experience in promoting hydrogen as a sustainable energy source. He highlighted their established **H2GENIO** technology for low-pressure **Steam Reforming**, which produces high-purity hydrogen from natural gas or biogas.

In the afternoon, the event continued with a visit to an exhibition set up to showcase significant applications for the production and use of **Hydrogen** in energy.

"The event, held in Vairano, provided an opportunity to highlight hydrogen's role as an energy carrier to institutions, major industries, and communities. The challenge of energy sustainability positions us as key contributors to the decarbonisation of industrial processes and the future of mobility. For over 100 years, we have been dedicated to the safe production and distribution of hydrogen," commented **Davis Reginato, General Manager of Nippon Gases Industrial and member of Assogastecnici's Hydrogen Energy Carrier Executive.**

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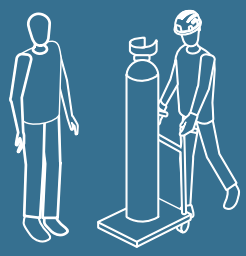

4.7.2 Customers and events

THE INNOVATIVE BLEND FOR RIPE FRUIT: FRUTIL®

During september 2023, **Nippon Gases site in Chivasso**, has obtained authorization to trade and sell plant protection products, and as of November 2023, the plant began producing the innovative blend **Frutil®**.

Frutil® is a **non-toxic gas mixture** designed to improve the post-harvest ripening process of fruit, ensuring that consumers receive fruit ripened to the ideal level.

Frutil® is formulated with **Nitrogen** and **Ethylene** that, in chambers specialized ripening chambers, triggers and accelerates the ripening processes in a manner similar to what occurs in nature. The ripening chambers use ventilation continuous and constant, where Frutil® is introduced in the form of gas to initiate ripening.

This promotes **cellular respiration**, transforms starch into sugars, changes chlorophyll into anthocyanins (improving fruit color) and enhances flavor and aroma, all through a natural process.

The product is suitable for use on a variety of fruits, including including lemons, tangerines, peaches, oranges, bananas and grapefruits and is also certified for organic farming of bananas and citrus fruits.

As a **plant protection product**, Frutil® has been registered with the Ministry of Health. With Frutil®, Nippon Gases is committed to providing a scientifically guided solution for **optimal ripening of fruit** throughout the supply chain and a concrete answer to increase the storage of fruit and combat food waste.

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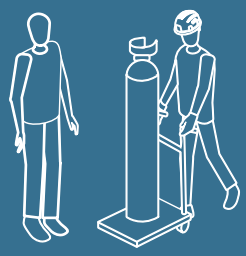

INNOVATION ON THE ISLAND OF THE SUN A STORY OF SUCCESS AND COLLABORATION

Enel Green Power Italia's **3Sun Gigafactory** in Catania, located in the heart of Sun Valley, traces its origins back to 2011. Since its inauguration, it has become a global leader in solar panel production. In 2022, with the support of the **TANGO (iTaliAN pv Giga factOry)** project and European funding for large-scale innovation, the plant is set to become one of Europe's largest Gigafactories. It will produce high-performance photovoltaic cells and modules with an annual production capacity of 3GW, enough to meet the energy needs of 1 million people. The production focuses on bifacial heterojunction photovoltaic panels, which capture light from both sides, enhancing performance and energy output. This technology increases panel efficiency from **10%** (thin film) to over **20%**.

In 2022, 3Sun issued a **tender** for the procurement of gases used in the production process, inviting all major European companies in the sector. The tender also included provisions for installing an on-site nitrogen production plant as part of the project.

This marked the beginning of a year-long negotiation process with the customer. Ultimately, Nippon Gases' proposal emerged as the winning choice, and the deal was successfully concluded.

As a result of this success, Nippon Gases was chosen in the second phase for the supply of **SSG (Semiconductor Specialty Gases)** and **SPG (Specialty and Pure Gases)**. The collaboration with BNF, the EU engineering team, and the Total Electronic team was crucial in securing this important contract, which involves the supply of a substantial amount of specialty and electronic gases.

Davis Reginato, General Manager of Nippon Gases Industrial and Nippon Gases Green Energy, proudly remarked: *"In today's competitive landscape, companies must continually adapt and evolve to stay ahead. A key change that has proven decisive is the shift from a traditional 'Nplant SoE' approach to a more customer-centric 'SoG' model. This transformation highlights the importance of listening to customers and understanding their deeper needs as essential for success. Our team's expertise in managing complex installations has given us a competitive edge, and the strong collaboration among Italy, BNF, EU Engineering, and the Total Electronic Team has been a significant success factor. This collective effort has demonstrated our strength as a high-performing multinational company. I am immensely proud of this achievement and extend my heartfelt thanks to everyone who contributed to making it possible."*

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CASE STUDY OF PASTIFICIO ZINI: SOLSTICE® L40X (R-455A): THE EFFICIENT AND SUSTAINABLE SOLUTION FOR COMMERCIAL REFRIGERATION SYSTEMS

The case study of **Pastificio Zini**, a Milanese company pioneering the deep-freezing of fresh pasta since 1956, highlights the modernisation of their in-store refrigeration system. This update was essential to meet new European F-gas regulations designed to minimise the environmental impact of refrigerant gases.

The collaboration between **Nippon Gases Refrigerants and Honeywell** has resulted in the development of **HFO** refrigerants, which are more environmentally friendly than traditional refrigerants. These new refrigerants have a lower global warming impact due to their reduced **TEWI** value.

LThe goal was to assist Pastificio Zini in selecting a new refrigeration system that not only complied with **F-gas** regulations but also proved cost-effective by reducing both initial investment costs and indirect **CO_2** emissions.

Alfa Projekt, an engineering firm, designed the new refrigeration system to replace the outdated setup of six separate units with a single centralised system. This new system uses **Honeywell's R-455A (Solstice® L40X)** refrigerant, which has a GWP of less than 150.

The new centralised system requires less maintenance than its predecessor, featuring only one outdoor unit and not affecting the indoor air-conditioning system. Additionally, had the pasta factory opted for a CO_2-based system, it would have encountered higher initial costs and increased energy consumption.

In conclusion, by selecting the new plant with the low-GWP **HFO R-455A gas**, Pastificio Zini has secured a long-term solution that meets environmental regulations while lowering both the total cost of ownership and indirect CO_2 emissions.

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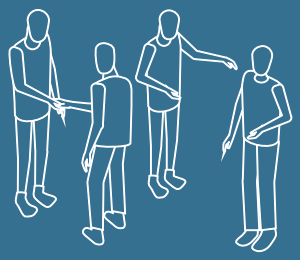

4.7.3 Our People

NIPPON GASES PHARMA RECEIVES CERTIFICATION FOR GENDER EQUALITY

As a testament to its commitment to gender equality, Nippon Gases Pharma achieved **UNI/PdR 125:2022 certification** from the accredited body **RINA Consulting** during FYE2024.

The UNI/PdR 125:2022 Reference Practice outlines national guidelines for gender equality management systems in companies. It requires the adoption and assessment of performance indicators to ensure adherence to these principles and to foster a **sustainable and enduring culture of diversity and inclusion**. The certification process involved Nippon Gases' management, along with the Human Resources and Quality departments, and included two audit phases.

The first stage of the **audit** focuses on reviewing documentation and understanding the requirements of the standard, as well as gathering information about the scope of the management system and processes. The second stage assesses the implementation status of the management system. Both audits were conducted during the autumn of 2023.

Additionally, in October 2023, an online training session was held for all staff to enhance understanding of the **UNI/PdR 125:2022** guidelines and the key components of the gender equality management system implemented by the company. This training event was held in preparation for the second audit phase and is a crucial step for obtaining certification, as it is specifically mandated by the Reference Practice.

Achieving the **UNI/PdR 125:2022 certification** underscores **Nippon Gases Pharma's** commitment to fostering an inclusive work environment that values and supports its employees. Achieving the UNI/PdR 125:2022 certification underscores Nippon Gases Pharma's commitment to fostering an inclusive work environment that values and supports its employees.

To ensure ongoing and effective adherence to the UNI/PdR 125:2022 gender equality standards, Nippon Gases Pharma's management has established a **Gender Equality Steering Committee**. This committee actively fosters an inclusive working environment and serves as an additional resource for employees facing challenges related to their individuality. It integrates with existing compliance measures and reporting channels within the organisation.

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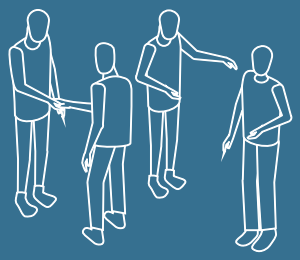

GENDER EQUALITY AND FEMALE LEADERSHIP

Gender equality is a key goal of the **Agenda 2030** for Sustainable Development. It is not only a fundamental human right but also essential for the progress and well-being of all. To delve deeper into this topic, a live event was held on Teams on November 9th, 2023. The session featured **Ms. Eduina Marino, General Manager of Nippon Gases Pharma, and Ms. Paola Amore, Carbon Neutrality Manager**. They shared insights with Nippon Gases Group colleagues, discussing their career journeys and addressing key aspects such as work-life balance, differences between female and male leadership models, and overcoming barriers to inclusiveness.

The event is part of the activities led by **Network WING**, which plays a crucial role within the Nippon Gases Group in fostering a **sustainable and inclusive culture**. Network WING is dedicated to promoting gender balance and ensuring equal representation of men and women at both operational and management levels within the company. This group, which continues to expand, is dedicated to combating all forms of discrimination through targeted initiatives. It focuses on promoting gender balance, enhancing the professional development of women, and strengthening their leadership skills.

The event also prompted reflection on the **International Day for the Elimination of Violence Against Women**, observed every year on November 25th. Gender equality and violence against women are deeply interconnected issues. Violence against women is a grave human rights violation that hinders their full participation in social, economic, and political life. Gender equality is essential for fostering a more just and equitable society and is a crucial step toward eliminating violence against women.

FIRST EQUALS MEETING. AN ENGAGING DISCUSSION ON DIVERSITY AND INCLUSION ISSUES

On June 23th, 2023, the first **Equals** meeting for the Italian Group took place at the Milan headquarters. The meeting was part of a series of initiatives during June, Pride Month, across all Nippon Gases' European offices, offering an opportunity to reflect on and discuss the concepts of diversity and inclusion.

Diversity and inclusion are central to **Nippon Gases'** strategy, where emphasis on people and the appreciation of individual differences drive innovation and enhance both personal and organizational performance. This strategy is rooted in the principles of "Diversity and Inclusion". Nippon Gases is committed to personal excellence through fostering a **diverse and inclusive work environment**. Every employee is encouraged to contribute and uphold the principles of safety, compliance, and continuous improvement in Diversity & Inclusion.

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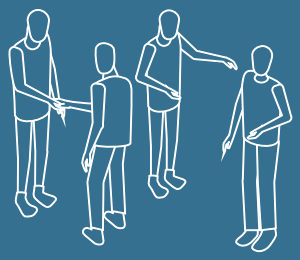

EIGA SAFETY AWARDS: ANOTHER SUCCESSFUL YEAR FOR SAFETY AT NIPPON GASES

At the annual **EIGA (European International Gases Association)** event in Paris, Nippon Gases received several prestigious awards.

Safety Award for Category 1 Members: This award is presented to companies in Category 1, which includes only the seven largest gas companies in Europe. It is based on the recordable accident rate across all company branches. **Nippon Gases'** consistent receipt of this award year after year indicates that its safety performance remains among the best in Europe, reflecting the outstanding efforts of each employee. Additionally, there were many awards for site safety.

EIGA awards for security at corporate sites: This year, 12 Nippon locations across Europe received bronze, silver, and gold medals for achieving 5, 10, 15, 25, and even 35 years without accidents. Three Nippon Gases Italia production plants were also among the award-winning sites: Novara, Anagni and Sant'Ambrogio Valpolicella.

THE CDC PROGRAMME HAS BECOME A NETWORK

The **CDC (Collaborative Digital Champions)** program was launched in 2020 by the HR and IT teams to drive digital transformation at Nippon Gases.

They include a group of Nippon Gases Italia employees who are **experts in the digital field**. Their task is to collaborate on integrating new technologies into daily work and to assist anyone with questions about using and applying the company's tools correctly.

By 2023, the CDC had grown into an **international network** of over 100 employees and continues to expand each month.

CDC
Collaborative Digital Champions

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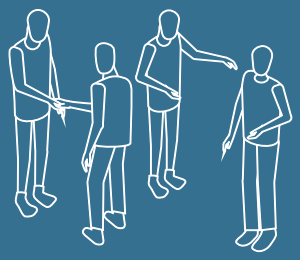

ASSOGATECNICI AWARDS FOR SAFETY AT WORK

At the **Annual Meeting of Assogastecnici** on May 4th, 2023, the **Awards for Safety at Work** were presented. These awards recognise the achievements of member companies over the past year and highlight their commitment to worker safety in their plants.

This year, three Nippon Gases production units received the award, specifically the following plants:

- **Anagni** and **Novara** were recognized for achieving 10 consecutive years without an injury;
- **Sant'Ambrogio Valpolicella** was honored for 5 consecutive injury-free years.

These awards affirm Nippon Gases' ongoing commitment to safety and reflect the company's steadfast approach to continuous improvement.

Safety has always been a top priority for the company, and operational discipline demands that each employee adhere to safety principles daily, ensuring the conditions necessary for safe operations.

In this way, everyone contributes to ongoing safety improvements, **working towards the goal of zero accidents and zero injuries.**

NIPPON GASES ITALIA WAS AWARDED BY FEDERCHIMICA FOR ITS CONTRACTUAL WELFARE INITIATIVES

On December 13st, 2023, at Federchimica's auditorium in Milan, during the National Health Safety and Sustainable Development Day, the event titled **"Digital and Sustainable Development: From Safety to Inclusion"** took place.

During the event, Nippon Gases was honored with the **"2023 Best Company Experiences"** award. This accolade recognizes companies in the sector that have excelled in implementing good practices in contractual welfare, as agreed upon by social partners.

The jury, composed of **Federchimica** and **trade union representatives**, acknowledged Nippon Gases for its exemplary agreements on Social Responsibility in second-level bargaining. They highlighted the positive outcomes of constructive dialogue and effective collaboration with trade unions, emphasising the importance of credibility, communication, and transparency.

The award was collected by **Michela Tarenzi, Labour Relations Manager, Marco Gallo, Industrial Relations Director**, and representatives of the company RSU. **Marco Messinese** (Chivasso), **Pierfelice Musa** (Novara) and **Ingrid Petracca** (Anagni).

"I am very pleased to have had the opportunity, alongside my colleagues, to receive this award. I see it as a significant recognition of the company's commitment to corporate welfare, especially highlighted by the ongoing renewal of the participation bonus over the years. Initiatives like this help to foster a culture of employee well-being. It is crucial to keep working on this to maintain a high level of awareness on these fundamental issues" commented Michela Tarenzi.

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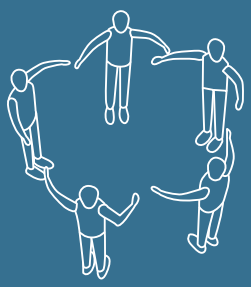

4.7.4 The community

SCHOLARSHIP TO THE 32nd REGGIMENTO GENIO GUASTATORI

Nippon Gases awarded a **€10,000 scholarship** to the 32nd Reggimento Genio Guastatori for their exemplary efficiency in neutralising a World War II bomb in Chivasso, near the company's plant, on July 23rd, 2023. On November 30th, 2023, Mr. Raoul Giudici presented the symbolic cheque, acknowledging the regiment's skill in ensuring a swift resumption of operations following the evacuation. The grant will enhance the regiment's occupational safety training. The award ceremony was held at the "Dalla Chiesa" barracks in Fossano, where Colonel Giuseppe Francesco Di Maggio, Commander of the Guastatori, expressed gratitude to the troops on behalf of the regiment. This funding highlights Nippon Gases' gratitude and supports the ongoing enhancement of the regiment's safety personnel.

NINOXAN® IN THE TREATMENT OF LABOUR PAIN IN SARDINIA

Thanks to the sales promotion efforts of **Nippon Gases Pharma**, health authorities in Sardinia have adopted a new approach to pain management. For the first time, the combination of Nitrous Oxide and Oxygen, **NinoXan®**, was used at Olbia Hospital to provide effective analgesia during childbirth.

This method increases the pain threshold during **labor** and offers a non-invasive, side-effect-free solution for childbirth that can also be applied in other medical fields.

The collaboration between the obstetrics unit and the anesthesia and resuscitation team was essential for the safe and effective implementation of this service. The **delivery room** was fully equipped for the procedure, and the staff were thoroughly trained to ensure successful outcomes.

The successful implementation of NinoXan® by Nippon Gases Pharma garnered significant attention and led to an invitation to the **AGOI** (Italian Obstetricians and Gynaecologists Association) event in Olbia on October 20th, 2023. This event, attended by the heads of **ASL** and regional hospitals, provided an ideal platform to showcase this innovative technology.

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Methodological Note

This Sustainability Report contains qualitative and quantitative information relating to the topics relevant to Nippon Gases Italia and its main stakeholders identified through the materiality analysis described in paragraph"1.6 Nippon Gases' Commitment to Sustainability". The information refers to FYE2024 (from 1st April 2023 to 31st March 2024) and the data relating to the previous two year period are also given for comparative purposes; "FYE" or "fiscal year" indicate that the data refer to the period from 1st April to 31st March.

Performance indicators and the reporting cycle have an annual basis. Unless otherwise specified, the information provided includes Nippon Gases Italia S.r.l. and all its wholly-owned subsidiaries, according to the corporate structure that went into effect on 16th April, 2021 and updated to April 2024.

The document is prepared in compliance with the "GRI Sustainability Reporting Standards", the most recent and widespread non-financial reporting standards defined by the Global Reporting Initiative (GRI), according to the "In Accordance - Core" option, which provides for the reporting of at least one GRI indicator for each material topic. The document was drafted in accordance with GRI Standards, considering reporting principles for defining content—such as Inclusiveness of Stakeholders, Sustainability Context, Materiality, and Completeness—and principles for defining quality, including Accuracy, Balance, Clarity, Comparability, Reliability, and Timeliness. For each topic to be reported, the description and the topic boundary along the Nippon Gases Italia value creation chain is provided below, specifying whether internal or external.

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THE CALCULATION METHODS

We describe below the main calculation methods and the sources from which the emission factors were taken, relating to the performance indicators mentioned herein, to supplement the information provided in this document.

— The quantity of greenhouse gas emissions Scope 1 e 2 è was determined with the following formula: activity data (m3 of natural gas, litres of diesel oil, kg of Fuel Gas, kg of Offgas Shu, KWh of electric energy, etc.) multiplied by the respective emission factor. Refrigerant gas losses (kg) multiplied by their respective Global Warming Potential (GWP) values are also taken into account.
Scope 3 GHG emissions were calculated using documented emission factors, which are ratios that quantify GHG emissions relative to a proxy measure of the activity in question. The formula applied is:

Greenhouse gas emissions = Emission factor × Activity data

— The emission factors and the GWP used for the calculation of GHG emissions are:

- **Scope 1 emissions**: for fuel emission factors and the GWP of refrigerant gases the data are taken from the Table of standard national parameters of the Italian Ministry of the Environment and Protection of Land and Sea (MATTM) for the reference year and from the "UK Government GHG Conversion Factors for Company Reporting – fuel properties" database published by the Department for Environment, Food and Rural Affairs (hereinafter "DEFRA") of the British government, updated annually. The information relating to OffGas Shu and Fuel Gases is taken from specific technical documents.
- **Scope 2 emissions**: the emissions associated with the vapour purchased were calculated using DEFRA data; for the electric energy purchased from the grid, the emissions were determined according to two methods, as provided for in the GRI Standards
  - For the Market-based determination, the residual mix emission factors given in document "European residual mix" published by the Association of Issuing Bodies (AIB) were used.
  - for the Location-Based calculation, the emission factors from Terna's "International Comparisons" document were used.
- **Scope 3 emissions** were calculated using emission parameters aligned with the parent company NSHD and emission factors from public databases, including the European Environment Agency (EEA), European Industrial Gases Association (EIGA), and DEFRA's 2023 "Condensed-set-update".

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MATERIAL TOPIC	GRI STANDARD	INTERNAL BOUNDARY	EXTERNAL BOUNDARY
GOVERNANCE			
Value Generation and distribution	GRI 201: Economic performances 2016	Nippon Gases Italia	-
Compliance, ethics, and business integrity	GRI 205: Anti-corruption 2016 GRI 206: Anti-competitive Practices 2016	Nippon Gases Italia	-
Supply Chain Management	GRI 204: Procurement Practices	Nippon Gases Italia	-
PEOPLE			
Workers' health and safety	GRI 403: Occupational Health and Safety 2018	Nippon Gases Italia	Partners and suppliers***
Attracting and retaining employees	GRI 401: Employment 2016 GRI 402: Labour and labour relations management 2016	Nippon Gases Italia*	-
Employee development	GRI 404: Training and Education 2016	Nippon Gases Italia*	-
Diversity and inclusion	GRI 405: Diversity and Equal Opportunity 2016	Nippon Gases Italia*	-
	GRI 406: Non -discrimination 2016	Nippon Gases Italia	-
PRODUCTS AND CUSTOMERS			
Innovation, research and development	Non-GRI Indicator	Nippon Gases Italia	-
Customer and community health and safety	GRI 416: Customer Health and Safety 2016	Nippon Gases Italia	-
ENVIRONMENT			
Energy efficiency	GRI 302: Energy 2016	Nippon Gases Italia**	-
GHG emissions and climate change	GRI 305: Emissions 2016	Nippon Gases Italia**	-
Waste management	GRI 306: Waste 2020	Nippon Gases Italia**	-
Water resources management	GRI 303: Water and water discharges 2018	Nippon Gases Italia**	-

The internal perimeter encompasses the following companies: Nippon Gases Italia S.r.l., Nippon Gases Industrial S.r.l., Nippon Gases Operations S.r.l., Nippon Gases Pharma S.r.l. Nippon Gases Refrigerants S.r.l. e Nippon Gases Green Energy S.r.l.

** The reporting of these GRI aspects only concerns the following companies: Nippon Gases Italia S.r.l., Nippon Gases Industrial S.r.l., Nippon Gases Operations S.r.l., Nippon Gases Pharma S.r.l., Nippon Gases Refrigerants S.r.l. e Nippon Gases Industrial Sud S.r.l., Nippon Gases Industrial Sud S.r.l. e Nippon Gases Green Energy S.r.l.*

*** Reporting of these GRI aspects only concerns the following companies: Nippon Gases Italia S.r.l., Nippon Gases Industrial S.r.l., Nippon Gases Operations S.r.l., Nippon Gases Pharma S.r.l., Nippon Gases Refrigerants DRYCE Nippon Gases Industrial Sud S.r.l., Nippon Gases Green Energy S.r.l.*

**** Reporting partially extended to partners and suppliers.*

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Appendix

Additional data for chapter
"3. Towards a carbon neutral world"

GRI 303-3, 303-4, 303-5: WATER WITHDRAWALS, DISCHARGES, AND CONSUMPTION (m^3)	FYE2022	FYE2023	FYE2024
Withdrawals	5,428,463	4,875,499	**5,072,553**
Discharges	5,081,590	4,534,918	**4,716,300**
Consumption	346,873	340,581	**356,253**

GRI 303-3 WATER WITHDRAWALS (m^3)	FYE2022	FYE2023	FYE2024
Well water	4,977,612	4,446,457	**4,653,522**
Surface waters	34,576	24,662	**24,902**
Municipal water system	16,329	17,186	**23,124**
Third party water system	353,365	350,359	**282,609**
Demineralised water	46,581	36,835	**88,396**
Total	5,428,463	4,875,499	**5,072,553**

GRI 303-4 WATER DISCHARGES (m^3)	FYE2022	FYE2023	FYE2024
Well water	-	-	**-**
Surface waters	4,899,195	4,381,024	**4,590,661**
Municipal sewer system	9,844	13,812	**19,733**
Third party sewer system	164,121	133,715	**97,398**
Recovered vapour water	8,430	6,367	**8,509**
Total	5,081,590	4,534,918	**4,716,300**

GRI 306-3 GENERATED WASTE (ton)[8]	FYE2022		FYE2023		FYE2024	
	Non-hazardous	Hazardous	Non-hazardous	Hazardous	Non-hazardous	Hazardous
Waste earmarked for recycling, reuse and energy recovery	441.9	19.6	435.9	15.4	**391.4**	**111.7**
Waste disposed of in landfills	60.0	47.6	125.9	39	**35**	**54**
Total waste	501.9	67.2	561.8	54.4	**423**	**169**

8 *It's important to note that the database used to calculate the waste generated in FYE22 differs from those used for FYE23 and FYE24, which are more detailed and comprehensive.*

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Additional data for chapter "4. Stronger thanks to our people"

GRI 401-1 RECRUITMENT OF NEW EMPLOYEES AND EMPLOYEE TURNOVER

NEW HIRES AND TERMINATIONS BY GENDER AND AGE FYE2024

	WOMEN				MEN			
	Hired		Terminated		Hired		Terminated	
	Number	Rate*[12]	Number	Rate*[12]	Number	Rate	Number	Rate
<30 years old	6	8%	2	4%	**13**	**17%**	**5**	**11%**
30-50 years	14	19%	12	27%	**31**	**41%**	**15**	**33%**
> 50 years old	2	3%	2	4%	**9**	**12%**	**9**	**20%**

NEW HIRES AND TERMINATIONS BY GENDER AND AGE FYE2023

	WOMEN				MEN			
	Hired		Terminated		Hired		Terminated	
	Number	Rate*	Number	Rate	Number	Rate	Number	Rate
<30 years old	4	7%	0	-	**6**	**10%**	**2**	**6%**
30-50 years	9	15%	6	19%	**33**	**55%**	**19**	**61%**
> 50 years old	1	2%	3	10%	**7**	**12%**	**10**	**3%**

NEW HIRES AND TERMINATIONS BY GENDER AND AGE FYE2022

	WOMEN				MEN			
	Hired		Terminated		Hired		Terminated	
	Number	Rate*	Number	Rate	Number	Rate	Number	Rate
<30 years old	**7**	**12%**	**1**	**2%**	**8**	**14%**	**3**	**7%**
30-50 years	**12**	**21%**	**6**	**15%**	**23**	**40%**	**16**	**39%**
> 50 years old	**2**	**4%**	**3**	**7%**	**5**	**9%**	**12**	**29%**

12 Rate determined as the ratio between number of hirings/terminations of employees in a given category and the total number of hirings/terminations.

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GRI 2-7, 2-8 - EMPLOYEES, NON-EMPLOYEES

STAFF BY EMPLOYMENT CONTRACT AND GENDER

	FYE2022		FYE2023		FYE2024	
	Women	Men	Women	Men	Women	Men
Apprenticeship	0	4	2	2	**1**	**4**
Permanent	169	477	171	495	**173**	**515**
Fixed-term contract	0	0	0	0	**7**	**13**
Total	169	481	173	497	**181**	**532**

STAFF BY EMPLOYMENT CATEGORY AND GENDER

	FYE2022		FYE2023		FYE2024	
	Women	Men	Women	Men	Women	Men
Full Time	160	480	166	496	**173**	**531**
Part Time	9	1	7	1	**8**	**1**
Total	169	481	173	497	**181**	**532**

GRI 405-1 DIVERSITY OF GOVERNANCE BODIES AND EMPLOYEES

BOARD OF DIRECTORS BY GENDER AND AGE

	FYE2022		FYE2023		FYE2024	
	Women	Men	Women	Men	Women	Men
<30 years old	0	0	0	0	**0**	**0**
30-50 years	0	1	0	1	**0**	**1**
> 50 years old	1	3	1	3	**2**	**2**
Total	1	4	1	4	**2**	**3**

EMPLOYEES BY PROFESSIONAL CATEGORY AND AGE GROUP

	FYE2022			FYE2023			FYE2024		
	<30 years old	between 30 and 50 years	> 50 years old	<30 years old	between 30 and 50 years	> 50 years old	<30 years old	between 30 and 50 years	> 50 years old
Managers	0	4	18	0	2	21	**0**	**4**	**22**
Middle managers	0	27	45	0	25	50	**0**	**27**	**61**
Employees	19	235	115	19	243	116	**22**	**241**	**133**
Operators	11	121	55	10	124	60	**11**	**129**	**63**
Total	30	387	233	29	394	247	**33**	**401**	**279**

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STAFF BY AGE AND GENDER

	FYE2022		FYE2023		FYE2024	
	Women	Men	Women	Men	Women	Men
<30 years old	11	19	11	18	**10**	**23**
30-50 years	117	270	119	275	**115**	**286**
> 50 years old	41	192	43	204	**56**	**223**
Total	169	481	173	497	**181**	**532**

STAFF BY PROFESSIONAL CATEGORY AND GENDER

	FYE2022		FYE2023		FYE2024	
	Women	Men	Women	Men	Women	Men
Managers	2	20	5	18	**5**	**21**
Middle managers	12	60	10	65	**15**	**73**
Employees	155	214	158	220	**161**	**235**
Operators	0	187	0	194	**0**	**203**
Total	169	481	173	497	**181**	**532**

GRI 403-9 WORK-RELATED INJURIES

NIPPON GASES ITALIA EMPLOYEES' ACCIDENTS AT WORK OVERVIEW

	FYE2022	FYE2023	FYE2024
Hours worked	1,167,340	1,183,344	**1,268,461**
Number of injuries	-	2	**2**
Injury rate[13]	-	1.69	**1.58**
Number of severe injuries[14]	-	-	**-**
Severe injury rate	-	-	**-**
Number of fatalities	-	-	**-**
Fatality rate	-	-	**-**

The main types of injuries suffered by Nippon Gases Italia workers were minor contusions due to tools or falls.

Nippon Gases Italia Group considers cases of absolute inability to work, originating in occasion of work (therefore excluding any in itinere).

13 *Injury rate: number of injuries * 1,000,000 / hours worked.*

14 *Severe injury: injury entailing absence from work for at least 6 months*
Only the hours worked by the drivers of the external transport companies and the technical staff of the external maintenance companies operating on behalf of the Nippon Gases Italia Group in the activity of Technical Assistance.

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EXTERNAL WORKERS' ACCIDENTS AT WORK

	FYE2022	FYE2023	FYE2024
Hours worked	503,814	514,232	**611,797**
Number of injuries	3	5	**0**
Injury rate	5.95	9.72	**0**
Number of severe injuries	-	-	**-**
Severe injury rate	-	-	**-**
Number of fatalities	-	-	**-**
Fatality rate	-	-	**-**

The main types of injuries suffered by external workers were due to road accidents or were minor contusions due to tools or falls.

GRI 204-1 PERCENTAGE OF EXPENDITURE ALLOCATED TO LOCAL SUPPLIERS

LOCAL SUPPLIER OF NIPPON GASES ITALIA

	FYE2022	FYE2023	FYE2024
Local suppliers (italiani)	48.8%	70.7%	**68.4%**

a. The percentage represents the proportion of spending on local suppliers relative to the total expenditure for all Nippon Gases Italia supplies.
b. By "local supplier," the organisation refers to suppliers located throughout Italy.
c. Given that Nippon Gases Italia operates sites and offices across the country, Italy was deemed the location of significant activities.

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GRI content Index

STATEMENT OF USE	Nippon Gases Italia submitted a report following GRI Standards for the period from April 1st, 2023, to March 31st, 2024.
GRI 1	GRI 1 - Fundamental Principles, Version 2021
Relevant GRI sector standards	Not applicable

GRI STANDARD / OTHER SOURCE	DISCLOSURE	LOCATION	OMISSIONS		
			Requirements omitted	Reason	Explanation
GENERAL DISCLOSURES					
GRI 2 General Disclosures *Version 2021*	2.1 Organisational Details	1.2 Nippon Gases in the world 1.4 Corporate structure			
	2.2 Entities included in the organisation's sustainability reporting	- Methodological note			
	2.3 Reporting Period, Frequency and Point of Contact	- Methodological note			
	2-4 Restatements of information	- Methodological note Any minor changes are reported in appropriate footnotes			
	2-5 External assurance	This report is not subject to external assurance			
	2.6 Activities, Value Chain and Other Business Relationships	1.5 The value chain of Nippon Gases Italia 2.5 Markets of Nippon Gases Italia 4.6 Suppliers: an important component of the team			
	2-7 Employees	4.1 The Human Capital of Nippon Gases Italia - Appendix			
	2.8 Non-employees	4.1 The Human Capital of Nippon Gases Italia - Appendix			
	2-9 Structure and composition of governance	2.1 Our Governance			
	2-10 Appointment and selection of the highest governing body	2.1 Our Governance			
	2.11 President of the Highest Governing Body	2.1 Our Governance			
	2.12 Role of the highest governing body in impact management and control	2.1 Our Governance			
	2.13 Delegation of responsibility for impact management	2.1 Our Governance			
	2.14 Role of the highest governance body in sustainability reporting	2.1 Our Governance			
	2.15 Conflicts of interest	2.2 Business integrity standards			
	2.16 Communication of critical issues	2.2 Business integrity standards			
	2.17 Collective expertise of the highest governing body	2.1 Our Governance			
	2.18 Performance Evaluation of the highest governing body	2.1 Our Governance			
	2.19 Remuneration Rules	Managers are employees who receive a fixed salary, as determined by the CCNL, along with bonuses tied to the Group's overall performance and personal targets. Board members do not receive any remuneration for their roles.			

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GRI STANDARD / OTHER SOURCE	DISCLOSURE	LOCATION	OMISSIONS		
			Requirements omitted	Reason	Explanation
	2.20 Remuneration Determination Procedure	Managers are employees who receive a fixed salary, as determined by the CCNL, along with bonuses tied to the Group's overall performance and personal targets. Board members do not receive any remuneration for their roles.			
	2.21 Total annual salary ratio	- N/D	Omission	Confidentiality constraints	The Group deemed the information required to calculate the indicator as confidential and, therefore, chose not to publish it for this fiscal year.
	2.22 Sustainable development strategy statement	- Letter to Stakeholders 1.6 Nippon Gases' Commitment to Sustainability			
	2.23 Policy commitment	2.1 Our Governance			
GRI 2 General Disclosures ***Version 2021***	2.24 Integration of commitments in terms of policy	2.1 Our Governance			
	2.25 Remedial Processes Negative impacts	1.6 Nippon Gases' Commitment to Sustainability 2.2 Business integrity standards 2.3 Nippon Gases Italia's management systems 3.3 The management of environmental aspects			
	2.26 Mechanisms for requesting clarification and raising concerns	2.2 Business integrity standards			
	2.27 Compliance with laws and regulations	There have been no reported instances of non-compliance with laws or regulations within the Group that resulted in fines or other penalties.			
	2.28 Membership of associations	1.6 Nippon Gases' Commitment to Sustainability			
	2.29 Approach to stakeholder engagement	1.6 Nippon Gases' Commitment to Sustainability			
	2.30 Collective Agreements	4.2 Working for Nippon Gases Italia - Content Index 100% of employees are covered by collective bargaining agreements.			

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GRI STANDARD / OTHER SOURCE	DISCLOSURE	LOCATION	OMISSIONS		
			Requirements omitted	Reason	Explanation
MATERIAL THEMES					
GRI 3 Material Themes *Version 2021*	3.1 Process for determining material themes	1.6 Nippon Gases' Commitment to Sustainability - Methodological note			
	3-2 List of material topics	1.6 Nippon Gases' Commitment to Sustainability			
Value management and distribution					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	2.4 The value generated by Nippon Gases Italia			
GRI 201	201-1 Economic value directly generated and distributed	2.4 The value generated by Nippon Gases Italia			
Supply Chain Management					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	4.6 Suppliers: an important component of the team			
GRI 204	204-1 Proportion of expenditure with local suppliers	- Appendix			
Compliance, ethics, and business integrity					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	2.2 Business integrity standards			
GRI 205	205-3 Confirmed incidents of corruption and actions taken	2.2 Business integrity standards			
GRI 206	206-1 Legal actions for anti-competitive behavior, anti-trust and monopoly practices	2.2 Business integrity standards			
Energy efficiency					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	3.2 Nippon Gases Italia's approach to environmental sustainability 3.3 The management of environmental aspects			
GRI 302	302-1 Energy consumption within the organization	3.3 The management of environmental aspects			
Water resources management					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	3.2 Nippon Gases Italia's approach to environmental sustainability			
GRI 303	303-1 Interactions with water as a shared resource	3.3 The management of environmental aspects			
	303-2 Management of water discharge-related impacts				
	303-3 Water withdrawal	3.3 The management of environmental aspects - Appendix			
	303-4 Water discharges				
	303-5 Water Consumption				

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GRI STANDARD / OTHER SOURCE	DISCLOSURE	LOCATION	OMISSIONS		
			Requirements omitted	Reason	Explanation
GHG emissions and climate change					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	3.2 Nippon Gases Italia's approach to environmental sustainability 3.3 The management of environmental aspects - Methodological note			
GRI 305	305-1 Direct emissions of GHG (Scope 1)	3.3 The management of environmental aspects			
	305-2 Indirect emissions GHG from energy consumption (Scope 2)				
	305-3 Other Indirect emissions of GHG (Scope 3)	3.3 The management of environmental aspects			
Waste management					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	3.2 Nippon Gases Italia's approach to environmental sustainability 3.3 The management of environmental aspects			
GRI 306	306-1 Waste production and significant impacts of waste	3.3 The management of environmental aspects			
	306-2 Management of significant impacts of waste				
	306-3 Waste generated	3.3 The management of environmental aspects - Methodological note			
Attracting and retaining employees					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	4.2 Working for Nippon Gases Italia			
GRI 401	401-1 New hires and turnover	4.2 Working for Nippon Gases Italia - Appendix			
Workers' health and safety					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	2.3 Nippon Gases Italia's management systems 4.2 Working for Nippon Gases Italia 4.5 Health and safety: a top priority for Nippon Gases Italia			
GRI 403	403-1 Occupational health and safety management system	2.3 Nippon Gases Italia's management systems 4.5 Health and safety: a top priority for Nippon Gases Italia			
	403-2 Hazard identification, risk assessment and incident reporting	4.5 Health and safety: a top priority for Nippon Gases Italia			
	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	4.2 Working for Nippon Gases Italia 4.5 Health and safety: a top priority for Nippon Gases Italia			

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GRI STANDARD / OTHER SOURCE	DISCLOSURE	LOCATION	OMISSIONS		
			Requirements omitted	Reason	Explanation
Workers' health and safety					
GRI 403	403-6 Worker training on occupational health and safety	4.5 Health and safety: a top priority for Nippon Gases Italia			
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships				
	403-9 Work-related injuries	4.5 Health and safety: a top priority for Nippon Gases Italia - Appendix			
Employee development					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	4.4 Training at Nippon Gases Italia			
GRI 404	404-1 Average hours of training per year per employee	4.4 Training at Nippon Gases Italia Due to the organisational changes that have taken place, Nippon Gases Italia is able to specify the average hours of training per person and per professional category. The company is committed to including this information in its sustainability documents in the next few years.			
Diversity and inclusion					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	4.2 Working for Nippon Gases Italia			
GRI 405	404-1 Diversity of governance bodies and employees	2.1 Our Governance 4.2 Working for Nippon Gases Italia - Appendix			
GRI 406	406-1 Incidents of discrimination and corrective actions taken	2.2 Business integrity standards 4.2 Working for Nippon Gases Italia			
Customer and community health and safety					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	3.1 Innovation in service of the environment 3.2 Nippon Gases Italia's approach to environmental sustainability			
GRI 416	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	3.1 Innovation in service of the environment 3.2 Nippon Gases Italia's approach to environmental sustainability In the three-year period, there were no episodes of non-compliance regarding the impact on the health and safety of products and services.			

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GRI STANDARD / OTHER SOURCE	DISCLOSURE	LOCATION	OMISSIONS		
			Requirements omitted	Reason	Explanation
Innovation, research, and development					
GRI 3 Material Themes *Version 2021*	3-3 Management of material topics	3.1 Innovation in service of the environment			
Non GRI	Not applicable	3.1 Innovation in service of the environment			

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