

Sustainability Report

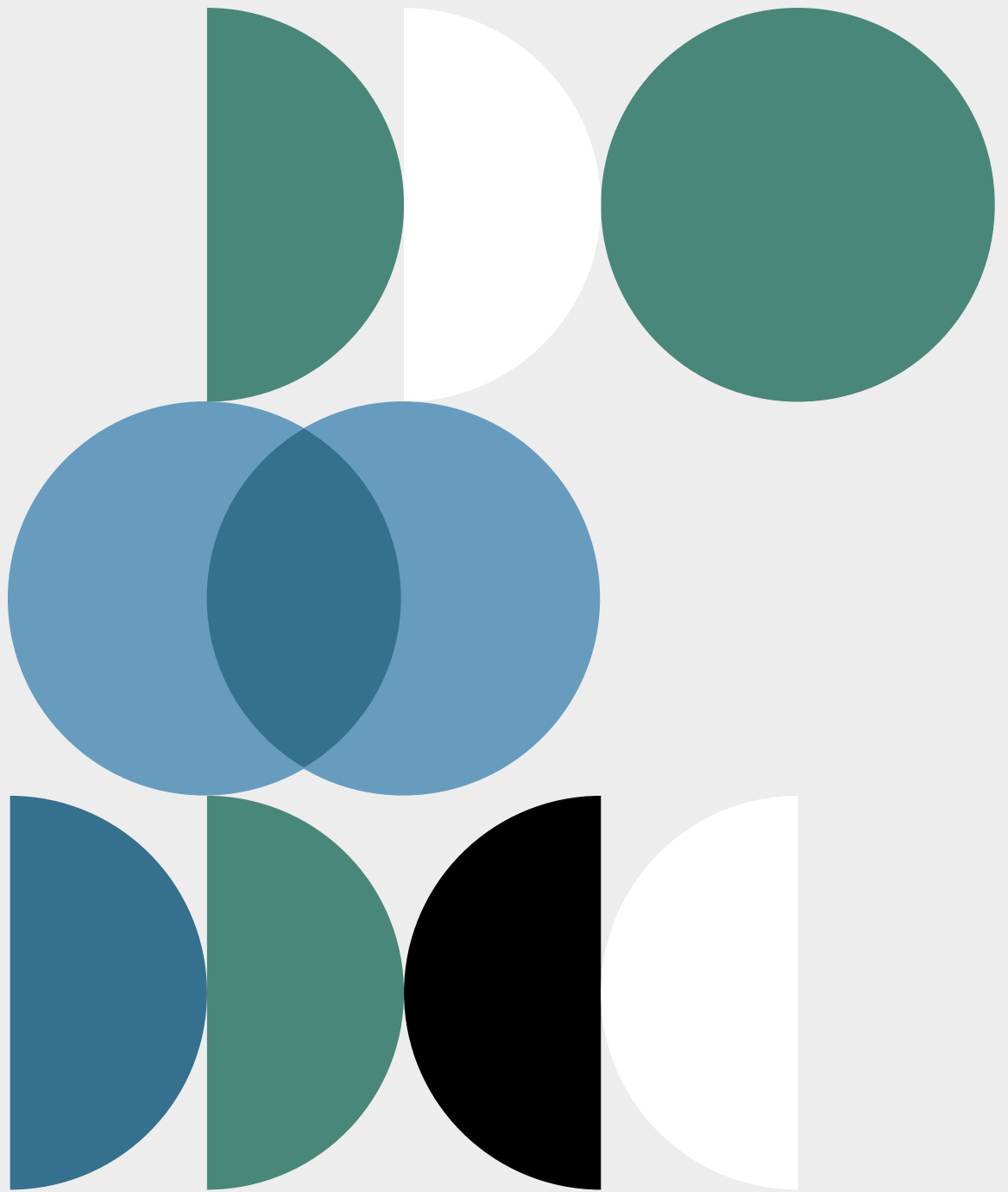
Nippon Gases Italia 2022

Reading guide

By becoming part of the Nippon Sanso Holdings Corporation (NSHD) Group, Nippon Gases Italia has changed its reporting period from 1st January to 31st December to 1st April to 31st March, starting from fiscal year 2019. Therefore, to align with financial reporting, the data given in this document relate to the fiscal year 2022 (from 1st April 2020 to 31st March 2021), which is referred to hereunder as “fiscal year 2022” or “FYE2022”.

Publication

Current issue: Sustainability Report 2022, with data related to fiscal year from 1st April 2021 to 31st March 2022.
Previous issues: Sustainability Report 2021, with data related to fiscal year from 1st April 2020 to 31st March 2021 and Sustainability Report Fiscal Year 2019, with data related to fiscal year from 1st April 2019 to 31st March 2020.



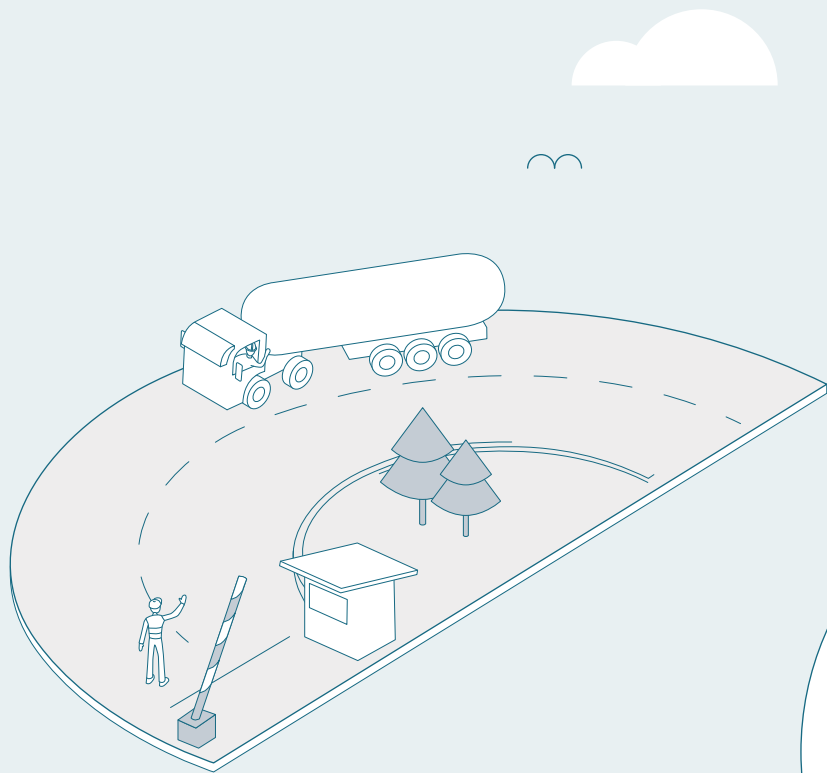
Proactive

Innovative

Collaborative

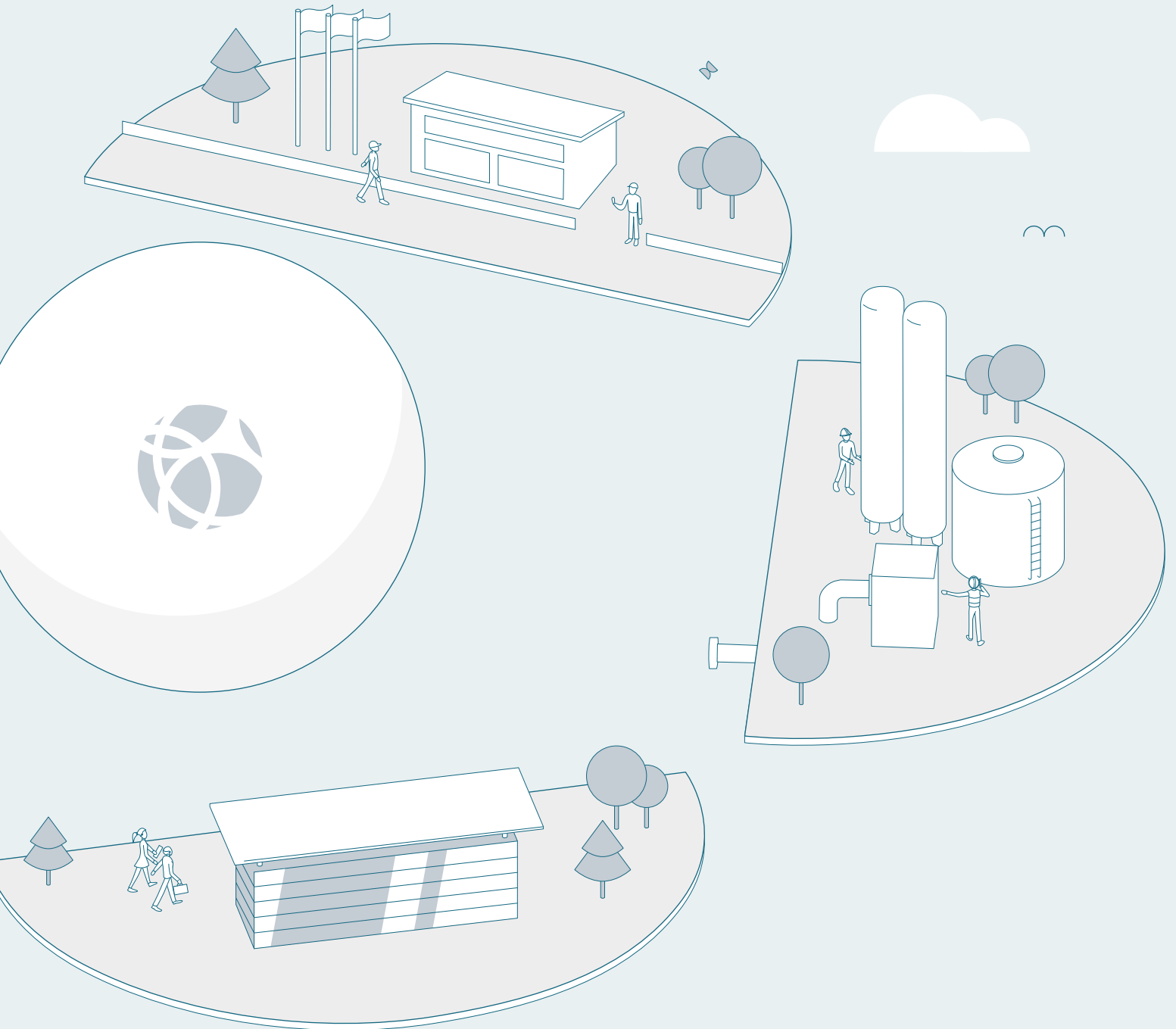
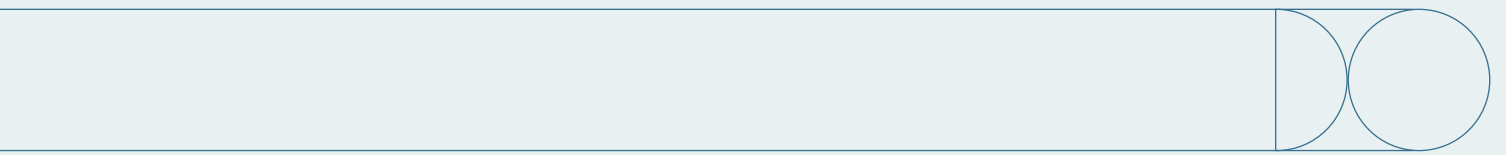
Our guiding principles

Nippon Gases Italia prioritizes listening to customer needs and developing partnerships with companies that operate in a diversified range of sectors, with the aim of contributing to improve environmental, social and economic impacts.



Our philosophy

Proactive. Innovative. Collaborative.
Making life better through gas technology.



Our vision

We aim to create social value through innovative gas solutions that increase industrial productivity, enhance human wellbeing and contribute to a more sustainable future.

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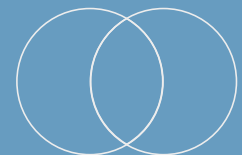
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Proactive



Innovative



Collaborative



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About Us

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

We offer our solutions to a wide range of markets and our technological offerings span from the most efficient supply options to tailored applications for every customer or partner.

Nippon Gases' commitment to our customers, employees and associates and to the communities in which we operate, reflects our dedication to safety, environment and sustainability.

All together, we are "The Gas Professionals" and we have the same goal: *"Making life better through gas technology"*.

Letter to our Stakeholders



It is a well-established practice for Nippon Gases Italia to present its Sustainability Report, similar to what has been done by its European parent company Nippon Gases Euro Holding and its Japanese parent company Nippon Sanso Holdings Corporation.

The fiscal year 2022 that has just ended was marked by a gradual return to normalcy after the changes brought on by the pandemic, which forced us to fundamentally rethink our business methods with its impacts. The preventive measures taken, however, did not result in any failure on the part of the Group to support employees and customers. On the contrary, during this fiscal year, Nippon Gases Italia took the opportunity to accelerate its development and innovation efforts, putting people's safety and quality at the forefront.

Our lives have undergone profound changes and today it is difficult to believe that the future holds a return to "business as usual". What is unfolding before our eyes now is a new perspective, not only regarding the present, but also especially with regard to the future. We must propel ourselves toward a new way of thinking, acting, producing and conceiving of life on this planet, because the development that we must strive for and to which we must look at with fresh eyes is one that makes sustainability its strength.

With this in mind, we have launched numerous initiatives to give more and more impetus to our business and that of our customers, and to make the most of the digital transformation we have initiated during this historic phase, which allows us to improve our offer and the quality of our products. All this while keeping alive, with passion, commitment, transparency and competitiveness, our core values, and characteristics: reliability, competence, and attention to customer needs.

With the support of our shareholder Nippon Sanso

Holdings Corporation (NSHD), we continue to move forward with determination in our globalisation process with a multi-year strategic investment plan.

Over the past year, Nippon Gases, which in its 100 years of experience has shown itself to be able to adapt to changes, sometimes anticipating them, has taken important steps towards the future.

In fact, two important acquisitions were finalised, the first being Home Medicine, a company operating in the integrated home care sector with innovative digital solutions, and the other Noxtec, a company dedicated to the design, production, and international distribution of state-of-the-art medical devices for the management of inhaled nitric oxide therapy.

Making expertise and technology available to human health to ensure a higher quality of care is the consistent choice of the group, which, in line with our corporate history, confirms our continuous commitment to finding innovative technological applications and solutions for our customers.

Raoul Giudici

President and Managing Director

Nippon Gases Italia

However, investments were not limited to so called adjacent businesses; in fact, in FYE2022, important steps were taken to increase production capacity and proximity to customers, with a focus on some industries that are key to the sustainable growth of the Italian industrial sector, such as food, pharmaceutical, medical, and manufacturing.

In August 2021, the Air Separation Unit in Pontinia started manufacturing after a major revamping project and in October we announced the construction of another Green B.A.G. (Bulk Atmospheric Gases) Farm in Campania.

The two new plants, which will be powered exclusively by renewable energy, will increase production capacity, further strengthening Nippon Gases Italia's presence in the market, helping to reinforce the solidity of its supply chain and confirming Nippon Gases as a point of reference for the entire Central Southern Italian area.

At the same time, sustainability remains one of our main objectives, which is why we felt the need to apply in Italy the medium-term action plan developed by Nippon Gases Europe, which places at the centre of all our actions the achievement of the targets defined by the 2030 Sustainable Development Goals Agenda. We are convinced that companies play a decisive role in the fight against climate change and therefore Nippon Gases Italy has decided, through a plan of concrete actions, to move with conviction towards a greener future, in continuity and absolute alignment with the objectives of the European parent company and the Japanese parent company.

Through this document we want to share with you who Nippon Gases Italia is, not only in words, but also in deeds. We are proud to present the results we have achieved; the initiatives we have put in place and all the projects we have managed to realise in the field of Sustainability. We want to describe a company that has been at the service of its customers for over one hundred years, offering the best in gas technology and strategy development. We never lose sight of our top priority, which is to ensure the health and safety of people and the protection of the environment. The Group is and will always be at the side of its customers to help them in their transition to a more energy-efficient and carbon-neutral economy by helping to manage the climate emergency we have been facing for some years now.

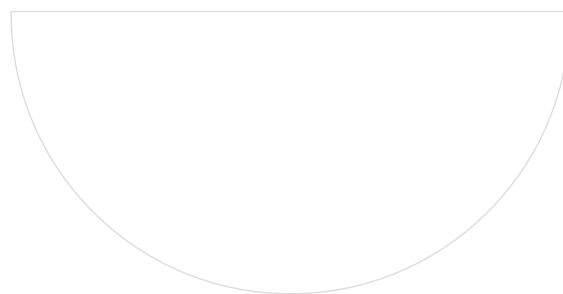
This commitment starts first and foremost with us: our production processes currently involve a high consumption of electricity, and road transport is still the main way of reaching our customers, so we have focused our efforts on these aspects. We want to make our contribution through investments and initiatives aimed at decarbonising and reducing the consumption of energy and water resources, thus decreasing the environmental impacts of our processes.

Despite the economic difficulties Europe is experiencing, due to the unprecedented growth in energy and natural gas costs, shortage of raw materials and rising inflation, we have increased the number of plants powered by renewable energy sources, with the aim of drastically reducing CO₂ emissions along the value chain, bringing the percentage of renewable energy to 64% from 38% just a year ago. Today, we can say that all our fractionation columns, i.e., the plants from which our cryogenic liquids such as argon, nitrogen and oxygen, are powered by renewable sources.

There can be no growth without constant attention to our people and the working environment in which they operate: this is why the Group is committed to ensuring that all employees have the opportunity to pursue a continuous path of professionalisation in which merit, competence and commitment are the only factors contributing to personal development.

Using this approach, the Group wants to firmly stand by your side to improve operations and make them more sustainable and environmentally friendly.

Special thanks are owed to all the employees who are at the heart of our company and who have made it possible to achieve the results illustrated in the following sections through their daily work with commitment, dedication, and responsibility.



1. Nippon Gases Italia

Since 2018, Nippon Gases Italia has been part of the Nippon Sanso Holdings Corporation (NSHD) operating in Europe through the Nippon Gases Euro-Holding.

Irrespective of whether we are supplying cryogenic, technical, food, medical, refrigerant, pure or specialty gases, our goal is to adhere to the highest standards of quality, safety and dependability. We aim to create social value through innovative gas solutions that increase industrial productivity, enhance people's wellbeing and contribute to promote a more sustainable future.



Through our technological applications, we are helping to shape the future and build a harmonious connection between individuals, companies and our planet.

Safety, compliance, diversity and inclusion are the core values that guide all activities.

Safety

- All accidents can be prevented.
- Safety is the responsibility of line management.
- Every employee is responsible for her/his own safety.
- Every employee must stop a job if it cannot be done safely.
- Efforts in safety yield results in safety.
- Safety is a condition of employment.

Compliance

- All compliance breaches can be prevented.
- Compliance is the responsibility of line management.
- Every employee is responsible for her/his 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

- Diversity and inclusion are essential to both our work and our workplace.
- Inclusion is a line management accountability.
- Every employee is responsible for being a model for inclusive behaviour.
- Every employee must stop non-inclusive actions or conduct.
- Efforts in diversity and inclusion will increase engagement and improve business results.
- Inclusiveness is a condition of employment.

1.1 Nippon Gases in the world

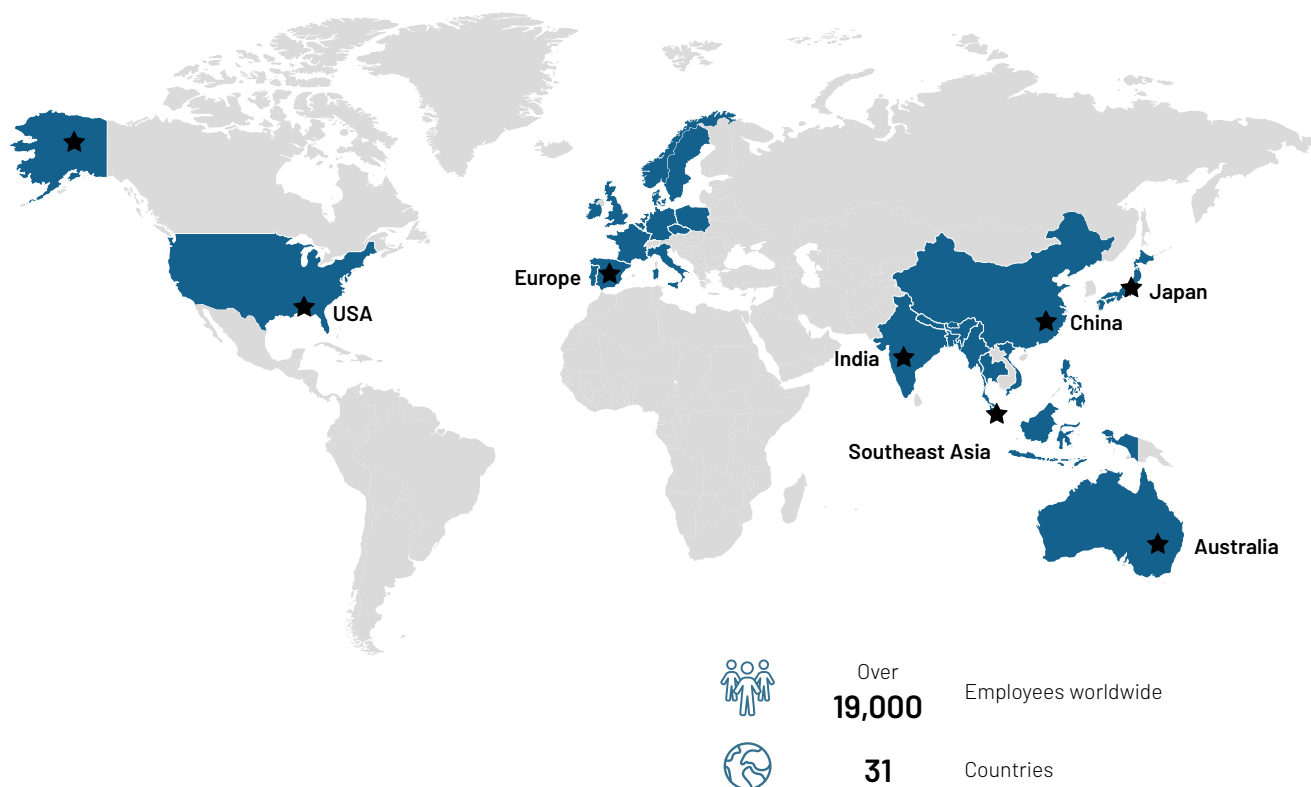
For 100 years, **Nippon Gases Italia** has worked in the invisible but essential world of gases, transforming a fundamental element such as air into products that can improve the life of everyone. With its know-how consolidated over the years, Nippon Gases enables different realities to operate in a cleaner and more productive manner, enhancing the efficiency of industrial processes and bringing air to those who need it.

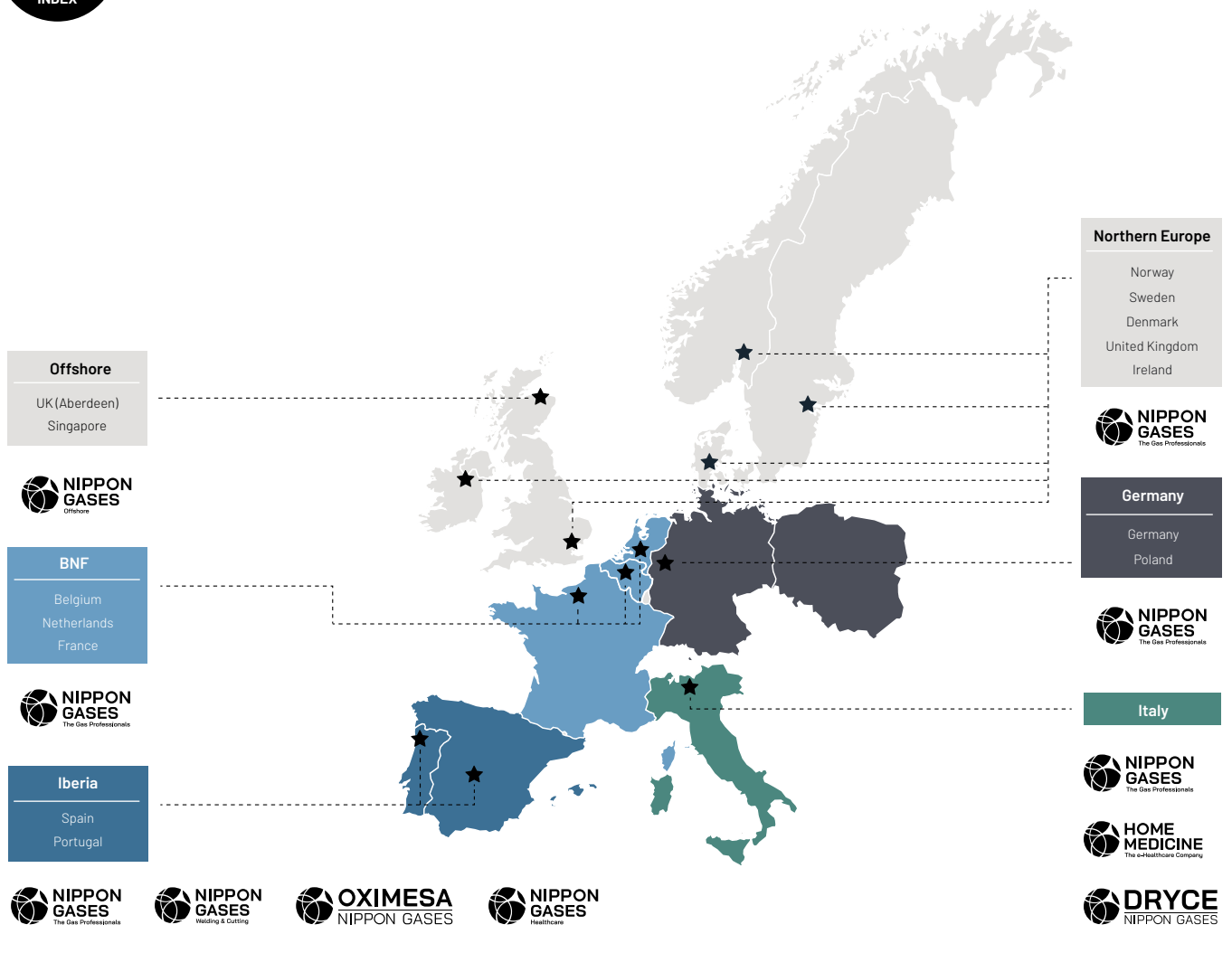
Nippon Gases Italia – part of Nippon Gases Europe, a member of the Nippon Sanso Holdings Corporation Group – is one of the benchmark companies in Italy for the production, distribution and sale of technical, food, medical, specialty and refrigerant gases. The goal of the Nippon Gases Italia Group is to contribute to the development of a stronger and more prosperous society, ensuring the supply of safe, dependable products. On 1st October 2020, Nippon Sanso Holdings Corporation (NSHD) 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 to the acceleration of the process of globalisation of our company, promoting the sharing of talents, resources and best practices, with obvious advantages in all the various operational areas, such as compliance, human resources, legal and insurance, marketing, operations, purchasing, productivity, safety, environment, quality 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 19,000 employees and operates in 31 countries and regions around the world, including Southeast Asia, Korea, China, India, Australia and United States.

NSHD supplies essential products services for various industries, including the steel, chemicals, energy, electronics, automotive, construction, food and biological science sectors.





★	13	Main offices
👥	Over 3,000	Employees throughout Europe, 27.8% female
🤝	Over 150,000	Customers
🌐	13	Countries
📈	Around € 1.6 billion	Turnover in fiscal year 2022

Nippon Gases offers 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”.**

Compared to the plants in Italy, two important innovations took place in 2021.

The Air Separation Unit in **Pontinia** resumed production activities after completing a major revamp and became operational again from the second half of 2021 with respect to the production of technical gases. Over the next few months, the plant will complete the applications for permits to produce food and medical gases.

Furthermore, in October 2021, the construction of a new air separation unit in **Caserta** was made official, with the aim of increasing the Group's competitiveness and proximity to customers, with a focus on certain sectors that are key to the sustainable growth of the manufacturing base.

The new plant, fuelled 100% by renewable sources, will produce the new Green Bulk Atmospheric Gases line, i.e., Nitrogen, Oxygen and Argon.



 Around 650 Employees other 99% with permanent contracts, 26% Female	 300 Agencies and resellers	 356.6 million euros of revenue in fiscal year 2022	 100 years of history	 Over 15,000 customers	 13 Bulk production plants 13 Filling centres
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* The map indicates the following: headquarter, sales offices, production plants, and storehouses for 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. and Nippon Gases Industrial Sud S.r.l.. Additionally, two production sites belonging to companies (Consorzio Novigas and Chemgas S.r.l.) where Nippon Gases Italia is a non-majority shareholder (Consorzio Novigas in Novi Ligure and Chemgas S.r.l. in Brindisi).

1.2 Over 100 years of history

In its over a hundred years of history, Nippon Gases Italia group (ex Rivoira) has always been in step with the times, adapting to changes and oftentimes anticipating them.

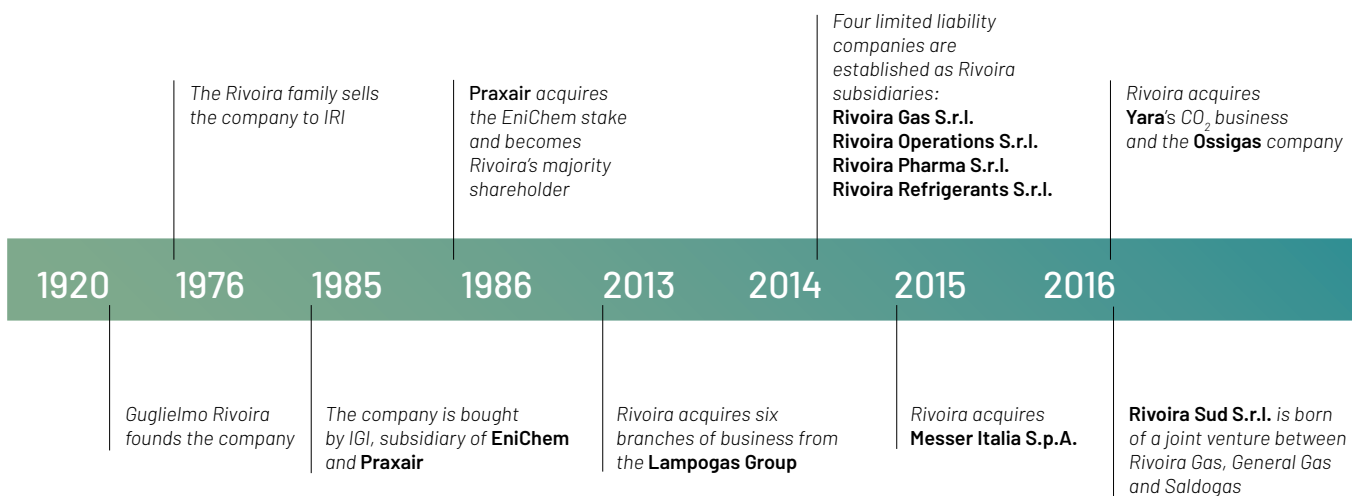
The ability to change in step with a changing world and the courage to reinvent oneself on a daily basis have been the cardinal principles of the company's evolution during its 100-year long history.

The story of Nippon Gases Italia group is a synthesis of the history of Italian industry. 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 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 the challenges of the new millennium.

In 2020, the Group celebrated its first 100 years of history. The anniversary came in a year marked by the state of emergency caused by the Covid-19 pandemic, in which the Nippon Gases Italia group was called upon to make an important contribution to significantly increase the production and distribution of oxygen, guaranteeing the care of patients in hospitals and at home, as well as supporting the creation of all the new emergency facilities that were needed.

While guaranteeing all operational activities, the group has implemented the necessary safety measures imposed by the authorities to limit infections, promptly reorganizing working arrangements to protect the health of its employees.



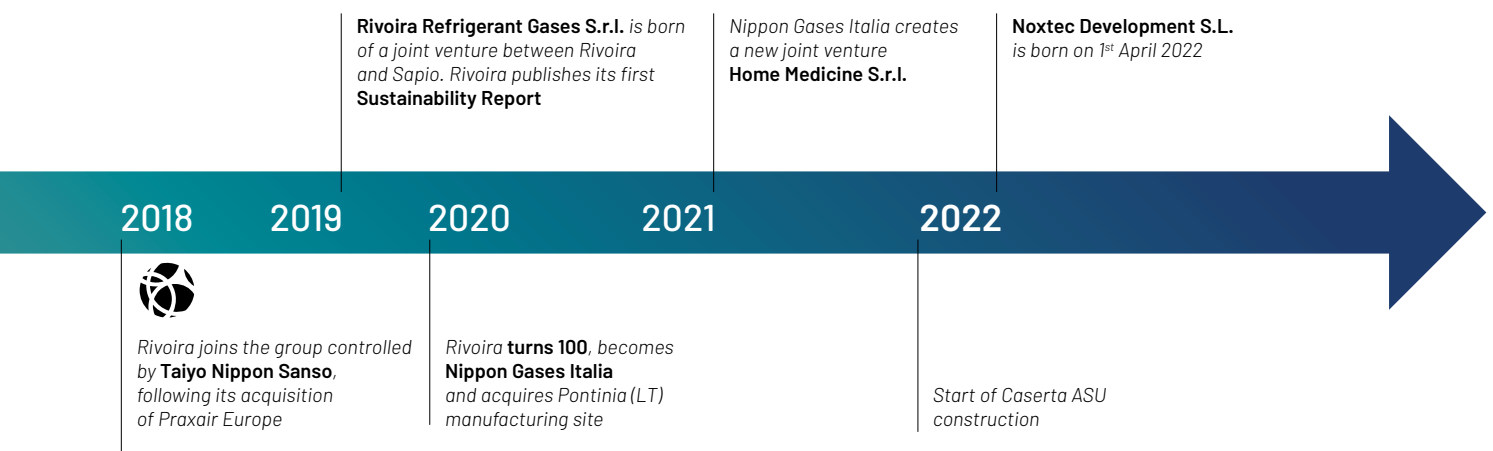


During 2021, the Group resumed its growth path with new momentum, overcoming the many difficulties of the international economy through continuous improvement in the areas in which it already operated and by breaking into new markets.

The Nippon Gases Italia Group responded with professionalism and dedication to the new challenges that came up during the year, once again proving that it was up to the task.

Loyalty to the company, capacity for initiative, sense of duty and team spirit have been some of the defining traits that have accompanied the group through its century-long existence, enabling it to rise above setbacks and constantly evolve.

These same characteristics, still present today, allow the Nippon Gases Italia group, despite the challenging period the world is going through, to look to the future with confidence.

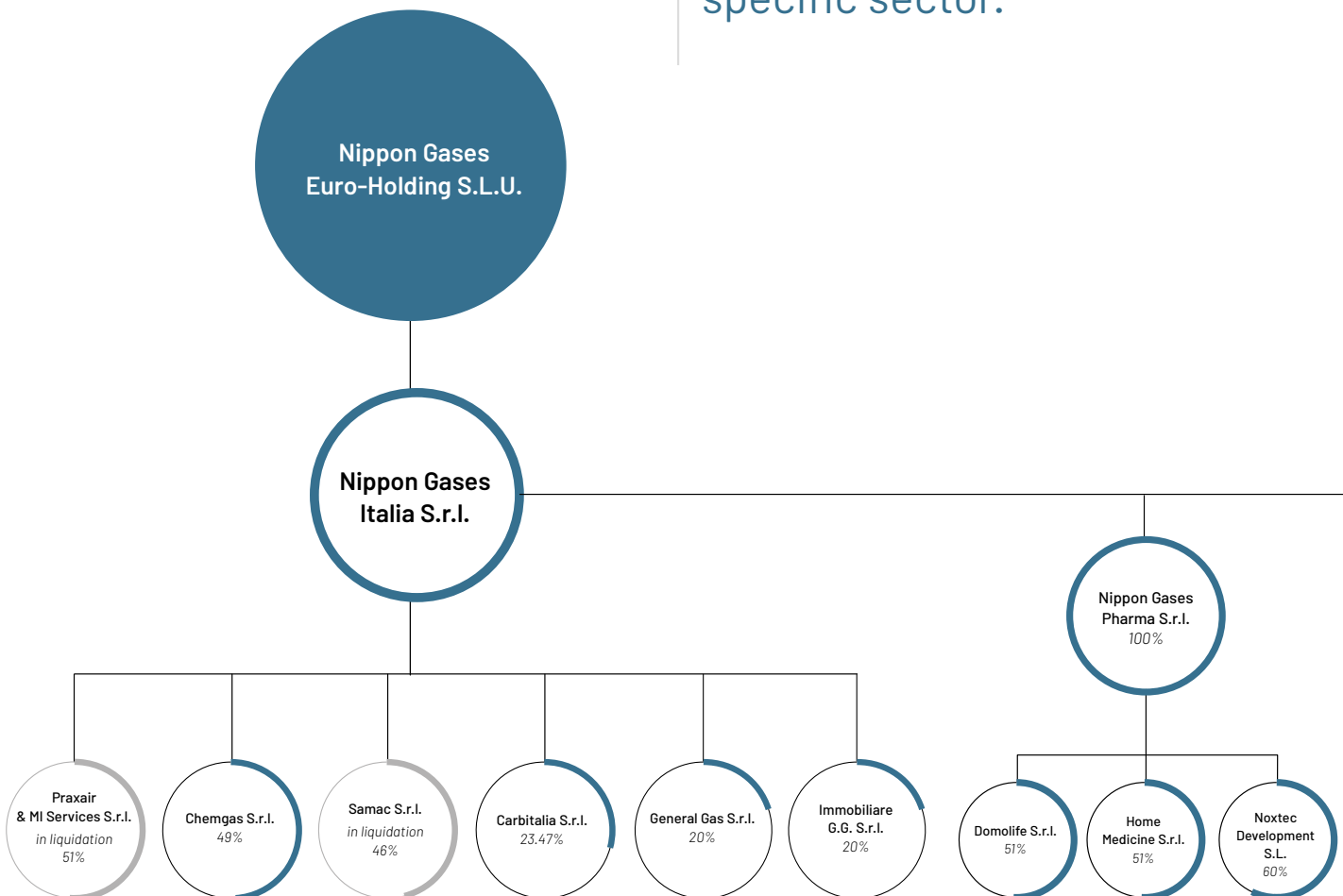


1.3 Corporate structure

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 effective operations, enabling them to provide the best products and services to their customers.

Nippon Gases Italia S.r.l. provides general and administrative services for its operating companies, including Human Resources, Administration Finance and Control, Legal, Health, Safety Environment and Quality, Procurement, IT, Communications, Productivity, and Customer support. Nippon Gases Italia is strongly committed to protecting the health and safety of the workplace and of the environment.

For Nippon Gases Italia policies on health and safety, the environment and quality, as well as its dedication to continuously improving performance and processes are an indispensable part of ensuring its customers, employees, and partners are fully satisfied. These values permeate all the companies belonging to the Nippon Gases Italia Group, each of which specializes in a specific sector.



The corporate structure reported is effective as of 1st April, 2022



Nippon Gases Industrial S.r.l. offers a wide range of product lines, develops new technologies, and creates personalized solutions built around the needs of individual companies in various industries, including metalworking, chemical, mechanical, food, and the tertiary sector.

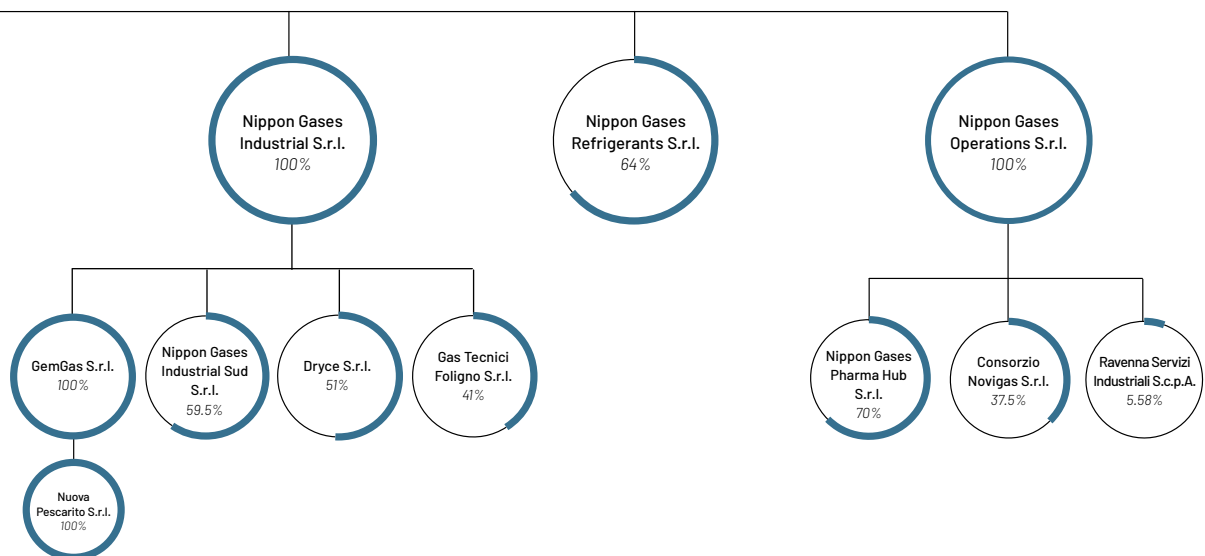
Nippon Gases Industrial S.r.l. focuses on the production of compressed gases and the sale of cryogenic, technical, food, pure, and specialty gases.

In addition to products, Nippon Gases Industrial S.r.l. provides services, materials, equipment and systems for different gas users, from large industry to small laboratories. The Company's primary goal is to satisfy market demand and needs, making competitive solutions available and offering its customers the opportunity to

use renewable sources and reduce energy consumption. Nippon Gases Industrial S.r.l. guarantees 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 S.r.l. as a joint venture between Nippon Gases Industrial S.r.l., Saldogas S.r.l. and General Gas S.r.l.

The main products supplied by Nippon Gases Industrial S.r.l. 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: Acetylene, Carbon Dioxide, Helium, Hydrogen, process gases for semiconductors.





Dryce S.r.l. is a Nippon Gases Italia member company established in 1998 as a joint venture between Nippon Gases Italia and the Marotta Group.

The company's initial purpose was the distribution of dry ice, but it progressively diversified, widened and enriched its product range to become one of the most important companies in the design, production and validation of controlled temperature packaging for the transport of pharmaceuticals, biological products and vaccines. It also offers diversified solutions for the transport of all products that must be stored continuously in a limited temperature range.

Dryce has developed the skills and know-how to stand out in the market, becoming known for product innovation and developing.

Of note is the contribution made by the company Dryce, which has been involved in transporting Covid-19 vaccines since December 2020 until today, a period during which Dryce made available its well-established experience in the complex field of refrigerated drug transportation.

Specifically, Dryce has developed ThermoKube and

ThermoBlock, two key solution 100% Made in Italy for vaccine storage at the predetermined temperature for a duration of between 5 and 10 days, depending on the way the packaging is used.

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 developed to withstand the very low temperatures of dry ice, with an extremely low sublimation rate that allows a cold chain shelf life similar to that certified by pharmaceutical companies.



GemGas S.r.l. a company whose sole shareholder is Nippon Gases Industrial S.r.l., mainly operates in the supply of food and industrial gases for small industry and end customers. Constantly updating techniques and expanding its range of services, GemGas has become a beacon of safety and 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 solutions.

Nippon Gases Operations S.r.l. focuses on operational activities: production and distribution of liquid gases and distribution of compressed gases in cylinders.

The Company produces high quality liquid cryogenic gases, strictly complying with health, safety, and environmental regulations.

The Company is focused on optimizing production and distribution of the products sold, through rigorous cost control, and continuous improvement of processes. Nippon Gases Operations is guided by innovation and commitment to safeguarding the environment.

The company is committed to continually reducing its consumption of raw materials, energy and waste production, issues of absolute critical importance from the second half of 2021 given supply difficulties and the huge price growth.



Nippon Gases Refrigerants S.r.l., joint venture between Nippon Gases Refrigerants S.r.l. and Sapio Produzione Idrogeno Ossigeno S.r.l., is active from 2019 in the market of air conditioning and refrigeration.

Today, Nippon Gases Refrigerant S.r.l. is 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 excellence in the management of regeneration and disposal services of refrigerant gases. In-depth coverage of the national territory via numerous branch offices, retailers and agents enables the company to be close to its customers and provide prompt, high quality services.

Nippon Gases Refrigerants employs in-depth knowledge and the technologies of Chemours, Honeywell, Daikin, and Arkema, the main global producers of refrigerant gases.

Nippon Gases Pharma S.r.l. develops and promotes the national market for medical gases in hospital and home care. Its activities include packaging, sales, distribution, and post-sales assistance for medical gases. Medical gases are an important segment of the healthcare gas sector, used for the treatment of pulmonary pathologies and respiratory assistance.

The gases are sold throughout Italy, and include Oxygen, Nitrogen, medicinal air, blends for therapeutic and diagnostic use, specialty gases of high purity for analysis and research, liquid Nitrogen for cryotherapy and cryopreservation, and gas blends for sterilization. Nippon Gases Pharma S.r.l. guarantees its customers by ensuring safe, reliable products and services, and by pursuing sustainable development.

Through its Home Care organization, Nippon Gases Pharma S.r.l. provides liquid and gaseous oxygen therapies and mechanical ventilation to patients being assisted in their homes.



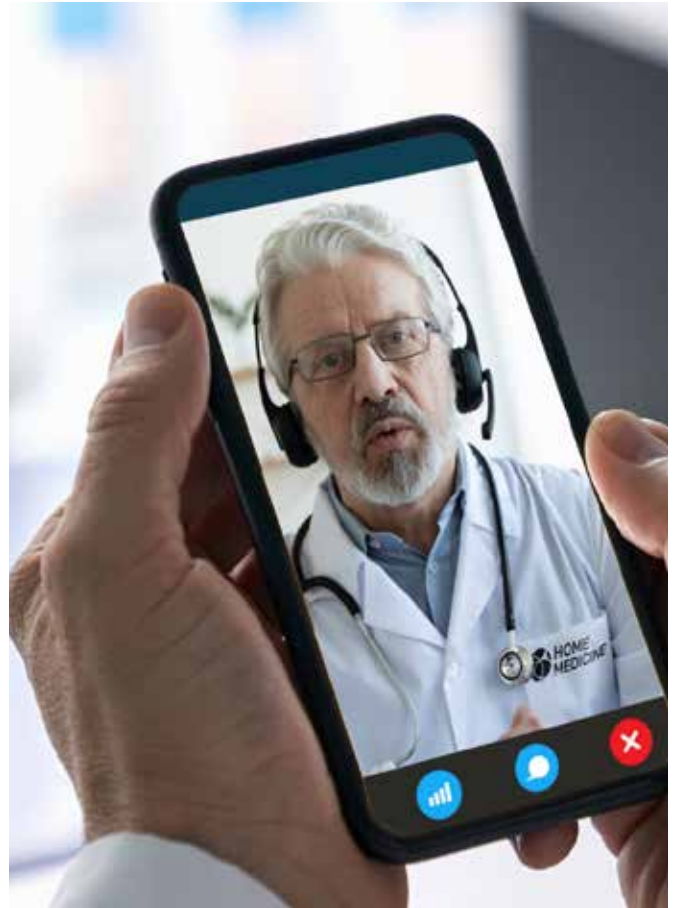
Domolife S.r.l. is a company in which Nippon Gases Pharma has a 51% shareholding and operates primarily in the sector of home-based oxygen therapy and ventilator therapy. This Company's policy has always been inspired by continuous, active collaboration with members of the medical sector to provide services and treatments for patients with debilitating respiratory diseases. Domolife S.r.l. provides additional personalized services to contracting facilities for patients' healthcare management needs. Thanks to its experience and structure, Domolife S.r.l. is also involved in the sale and provision of electro-medical equipment and medical devices for healthcare professionals and for individuals.

Home Medicine S.r.l. a joint venture between Nippon Gases Pharma S.r.l. and Home Medicine Italia S.r.l. established on April 2021, specialised in the delivery and organisation of home care services mated to telemedicine services 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, conducted with the aim to define new healthcare protocols, devices and digital health services for a patient's all-round wellbeing. Through the acquisition of control of this company, Nippon Gases aims to create a new reality with the goal of becoming a market reference in Italy and Europe, offering cutting-edge services and technologies in a rapidly developing sector such as telemedicine.

Finally, in April 2022 Nippon Gases Pharma finalized its acquisition of a 60% stake in **Noxtec Development**, a Spanish company specializing in the field of inhaled nitric oxide (NO) therapies.

The aim of this new acquisition is to meet the needs of the nitric oxide therapy market, which has experienced significant growth in recent years, first consolidating in neonatal intensive care units, then in paediatric and adult settings, and finally playing a key role in the last two years in the treatment of Covid-19 patients.

The equipment for the administration of inhaled nitric oxide therapies is just one of the company's achievements, one of the fundamental cornerstones of which is innovation, aimed at improving the quality of medical products and services offered to healthcare companies and patients. The company aims to be a benchmark in the medical sector, relying on a competent, experienced and specialised team focused on the core values of both partners: reliability, quality, safety and sustainability.



1.4 The Nippon Gases Italia Value Chain

Nippon Gases Italia is one of the most important producers and distributors of industrial, food, medical, pure, specialty, and refrigerant gases in the Italian market.

Nippon Gases Italia begins with a simple element—the air—and transforms it, responding to the customer's every request: wherever, however, and whenever it's needed.

We describe below, **the value chain of Nippon Gases Italia**, representing the key processes and activities of the organisation, to explain how the Group creates value along its entire operational process from production to distribution.

According to the volume of gas required, Nippon Gases Italia helps the customer choose the most appropriate containers for their needs: from the pipeline, guaranteeing continuous supply of large gas volumes, to on-site storage tanks (from 1,500 to 60,000 litres), to a wide range of packs and cylinders.

Bulk production, or primary production, involves three types of facilities: Air Separation Units (ASU), CO₂ 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. This allows for large volumes of gas with continuous delivery necessary for their needs.

For customers located far from the primary sites of Nippon Gases Italia, the Group designs, builds, installs, and manages a wide variety of on-site systems to produce Oxygen, Nitrogen and Hydrogen, and for the recovery and purification of CO₂, directly on the customer's sites. Nippon Gases Italia also installs on-site systems of different sizes and capacities, equipped with storage tanks that are refilled with liquid product by a tanker.

The production of compressed gas, or secondary production, is carried out at the filling centres or package plants. The compressed gases are distributed throughout the country through direct sales, agencies, and resellers. A wide variety of gases, such as industrial gases, food gases, medical gases, high purity specialty gases, and finally refrigerant gases, are produced at the handling centres.

In addition to these gases, Nippon Gases Italia also sells chemical products (for example Acetylene, Ammonia and Chlorine).

Nippon Gases Italia has also introduced for compressed gases bundles loaded at a pressure of 300 bar, which offer around 45% more product compared to bundles traditionally loaded at a pressure of 200 bar.

Nippon Gases Italia organizational structure, made up of distribution centres, agencies, and a flexible sales network, ensures a wide presence throughout the country.

Nippon Gases Italia offers also a special blends feasibility service that allows laboratories and research institutes to request customized studies of pure and specialty gases ensuring a high level of complexity, accuracy or certification class.

With its own ISO/IEC 17025 accredited laboratory, Nippon Gases Italia is able to satisfy the various requirements regarding calibration mixtures and to prepare for each cylinder a certificate of analysis that indicates the composition of the gas mixture contained.

Bulk Production

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

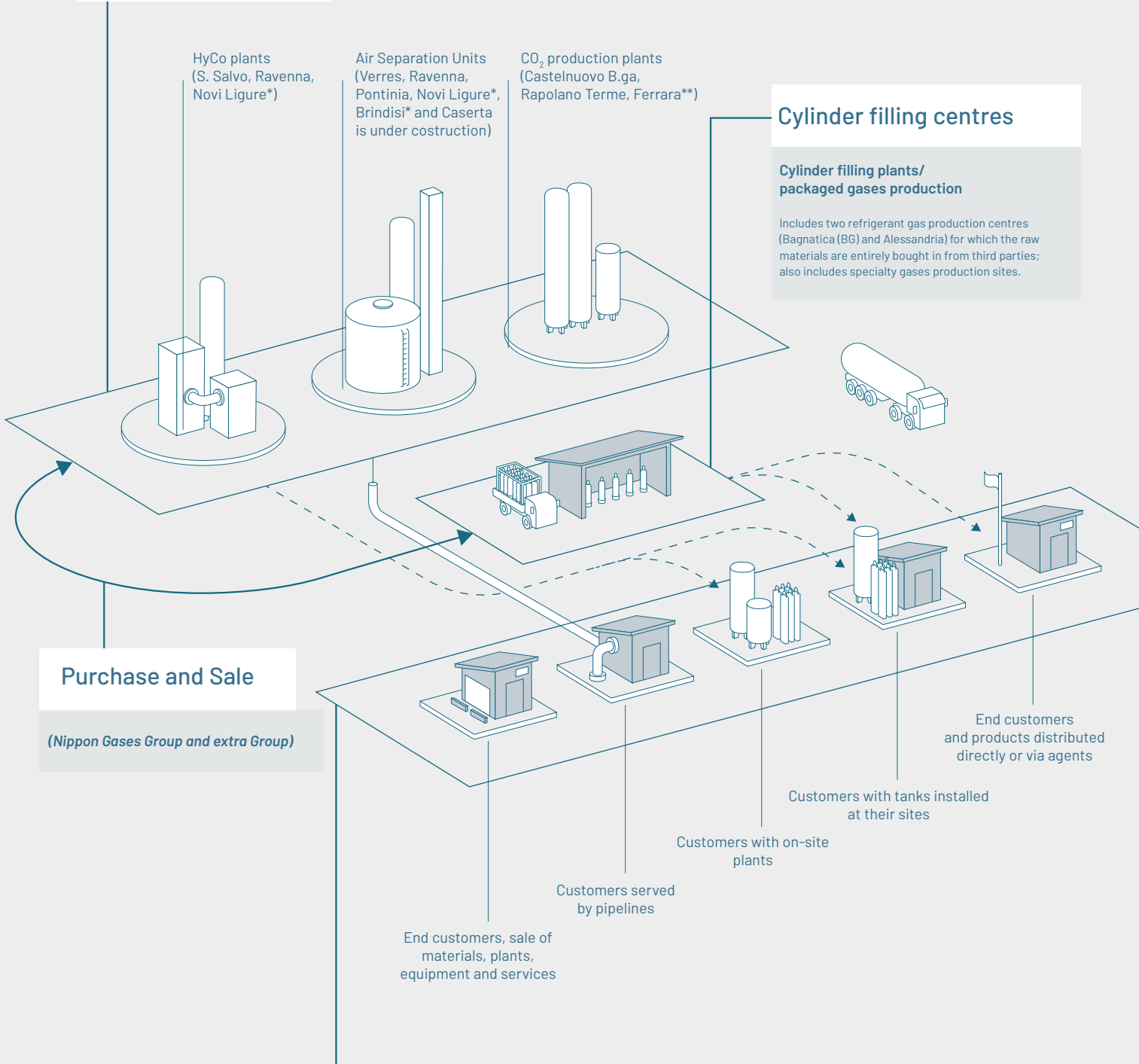
Air Separation Units
(Verres, Ravenna,
Pontinia, Novi Ligure*,
Brindisi* and Caserta
is under construction)

CO₂ production plants
(Castelnuovo B.ga,
Rapolano Terme, Ferrara**)

Cylinder filling centres

Cylinder filling plants/ packaged gases production

Includes two refrigerant gas production centres
(Bagnatica (BG) and Alessandria) for which the raw
materials are entirely bought in from third parties;
also includes specialty gases production sites.



Purchase and Sale

(Nippon Gases Group and extra Group)

End customers
and products distributed
directly or via agents

Customers with tanks installed
at their sites

Customers with on-site
plants

Customers served
by pipelines

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

Distribution and sale of products and services



Innovation, research and
development of new solutions



Customer support and credit
management service



Technical support service

* Brindisi and Novi Ligure plants are belonging to Companies of which Nippon Gases Italia is a non-majority shareholder; ** Ferrara plants owned but managed by a third party



Nippon Gases Italia offers its customers also the Cryo Service, which provides on-site filling of small to medium (30 l to 240 l) liquid Nitrogen cryogenic storage containers via a mobile 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.

Supplying gases is only the first step, Nippon Gases Italia offers a wide range of additional services, guaranteeing the quality of the gases supplied, and ensuring they can be used reliably and safely in all their applications. The Nippon Gases Italia Group collaborates with customers to develop new technological solutions to help them improve their processes in various areas, such as energy and environmental sustainability, production efficiency, safety, and quality.

The Nippon Gases Italia Group provides its customers with a 24/7 technical support system that carries out 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 services**, including analysis of system performance, statutory updates, and process optimisation as a function of specific customer requirements.

In this respect, during 2021, the Group has made a major effort to redefine the characteristics of this service, by evolving from the old concept of simple customer assistance and expanding the range of services offered to create a new model that aims to increase the quality of technical assistance by increasing and diversifying the 'core' offer with new support and collaboration proposals.

- **Total Gas Management service** involves complete supply management, from periodic checks on functioning of the system to storehouse management of the products offered and can be customized according to the specific needs of the customer.

- The **remote monitoring service** aims to safeguard the customer's system and processes, improving flexibility in the management of orders as it provides level control, thus supporting the refilling of monitored tanks.

The service allows various parameters specific to the storage and distribution system to be monitored, meaning any anomalies can be quickly identified.

Nippon Gases Italia can supervise the system remotely and in real time, evaluating any actions that become necessary, generating also an important optimisation of trips that are thus planned on the basis of the real needs of the customer.

- **Nitrogen Pumping Services (NPS)**, for drainage of pipelines, reclaim and inertisation of systems and tanks, rapid cooling service for reactors and equipment, cryogenic cleaning system, and leak detection.
- E-learning and classroom customized **training courses** designed for the customer, to ensure gases can be used correctly and safely. The courses are flexible and are personalized according to the theoretical and operational needs of each customer.

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 necessary to carry out activities at the customer sites.

1.5 Our 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*».



Over the last 30 years, awareness has grown about the need to strive for improved social and environmental standards, and the need to build a better world while safeguarding our planet.

This understanding has led the European Union to launch a number of strategies, summarised in the European Green Deal, which Ursula Von der Leyen, the President of the European Commission, defined as «*Our new growth strategy that will make it possible to cut emissions and create jobs*».

For the first time, the industrial sector was called upon to adopt a new business model so as 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 Italia is strongly aligned with this vision. Sustainable development is one of guidelines and we make sure that the sustainability principles extend to all areas of our business, from the provision of gases and services to our relationships with our people, including suppliers and partners

For Nippon Gases Italia, sustainable development is a fundamental value and the engine that drives continuous improvement. In this context, the publication of our third Sustainability Report reflects the Nippon Gases Italia Group's intention to embark on a path of enhanced awareness, conducting a careful analysis of its value creation process and transparent communication to all its stakeholders regarding the impacts generated and the actions undertaken by Nippon Gases Italia Group on a daily basis to mitigate such impacts.





Nippon Gases Italia and sustainable development goals




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 and environmental goals to be achieved by 2030. The SDGs, divided into 169 targets, are part of the ambitious action program for peace and prosperity for 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 a resilient infrastructure. 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, on which it believes it may have a positive impact with its activities. Nippon Gases Italia undertakes to contribute to the achievement of the targets established at European level. The Nippon Gases Europe Group's achievements with regard to the targets defined in the previous Sustainability Report are published in the **Nippon Gases Europe Sustainability Report 2022** and are reported below:

SDG	TARGET NIPPON GASES EUROPE FYE2022	STATUS AND COMMENTS
MAIN AREA	CORPORATE GOVERNANCE AND COMPLIANCE	
	Maintain corporate governance guidelines and perform a strong culture of compliance and ethics.	On track. All guidelines were respected. The strong culture of compliance and ethics was supported by program regularly rolled out.
	100% commitment to the Code of Conduct by required employees.	On track. Done. Recertification stored in our web reporting system.
	Sustainable review of all potential integrity cases.	On track. Done for all cases. File managed by the Compliance Champion, and the Human Resources Director.
MAIN AREA	GLOBAL ENVIRONMENT	
	Reduce the GHG emissions in the period FYE2019 - FYE2029 by 35% absolute value vs FYE2019 base year emissions.	On track. In FYE2022 the GHG emission Scope 1+2 has been reduced 37% vs FYE2019.
	5% bulk transportation GHG intensity reduction (cumulative FYE2021 - FYE2024).	To follow. Current reduction 1.3% for the first year. This improvement has been challenged by the CO ₂ sourcing crisis which has forced longer distances deliveries.
	Promote Cost Reduction projects, generating Sustainable Development savings equivalent to 40,000 tonnes CO ₂ eq (cumulative FYE2021 - FYE2024).	On track. In FYE2022, 142 projects providing sustainable savings with a total of 10.8 thousand tonnes CO ₂ eq. Cumulative since FYE2021, 30 thousand tonnes CO ₂ eq (74% of target).
	Integrate all production sites into the Zero Waste programme.	On track. Current follow-up of waste generation in all sites.
	100% water management system for main consumer facilities during the period FYE2021 - FYE2024.	On track. Current follow-up of water consumption and optimisation programs in main sites. Facilities have been categorised based on the WRI (World Resource Institute) for its location Water Stress. In FYE2022, the facilities located in Very High Water Stress areas have reduced their water consumption in 4%.
	Include environmental assessments in 75% of the European assessments.	On track. In FYE2022, 88% of the assessment included the environmental protocol.

SDG	TARGET NIPPON GASES EUROPE FYE2022	STATUS AND COMMENTS
MAIN AREA	SOCIETY	
	Increase the # of internships to 3% of total population with main focus on Operations & Engineering and gender equality.	On track. NGE is convinced that recruiting internships is a strong way to acquire talented people for the organization. Young people training and offering a lot of development opportunities is binding them with our company. In FYE2022 we have increased from 1.5% to 2.1% (64) our number of internships.
	Increase in the coming 3 years community engagement initiatives 5% YOY - year on year (#projects, #participants, #spend).	To follow. We closed the year with 73 projects (in line with our KPI) and there are still a number of projects on going over the FYE. The focus remained for the biggest part on the donation of financial gifts and materials.
	By implementation of our environmental gas applications solutions, contribute to GHG emissions reduction in our customers.	On track. Continuous increase of Decarbonisation projects focused in fossil fuel reduction by implementation of our oxyfuel technology and specially designed burners. Active in the use of green and low carbon hydrogen as alternative to traditional fuels in Steel production. Valorization of wastes, combining our expertise in waste water treatment with Anaerobic digestion to obtain Biomethane. Active in carbon Capture Projects. This year FYE2022 our gases have saved 1.5 million tonnes of CO ₂ eq in our customers.
	Increase the participation and resources devoted to technology development clusters and promote working closely with suppliers focused on clean technologies and circular economy.	On track. Developing alliances with technology providers and other stakeholders to enlarge our decarbonization solutions portfolio. (e.g. gasifications, circular economy, valorization of waste). Our clear position towards a carbon neutrality transition is reflected in our active participation in joint proposals with different partners including H ₂ production by electrolysis, CO ₂ recovery, and flue gas purification.
MAIN AREA	PEOPLE	
	Maintain our current RI-rate leadership compared to the average of Cat1 member companies of EIGA.	On track. The Recordable Injury rate for Nippon Gases in FYE2022 is 0.90 improving 38% from last year value. This excellent result has resulted to received the EIGA (European Industrial Gas Association) Safety Award 2021 for Category 1 members.
	< 1 preventable product vehicle accidents (PVA) per one million km.	On track. The preventable accident rate of product vehicle was 0.16 accidents / million km driven for FYE2022. It is a good performance but not improving last year.
	Increase the female population overall to 30% by FYE2026.	On track. In FYE2022 we increased our female population to 27.8%.
	Increase the female specialist and managerial population to 28% by FYE2026.	On track. In FYE2022 our female participation was 27.1% in the specialist and managerial population.
	Initiate an European female mentoring project, resulting in a 70% promotion rate to managerial positions by FYE2024.	On track. Female project is on going in a very positive mode, lot of new initiatives are on going for the moment, all with the purpose to have a group of talented employees ready for promotion.

Results from the Sustainability Report 2022 of Nippon Gases Euro-Holding S.L.U.

Nippon Gases Europe medium-term sustainability plan

Nippon Gases Europe, in combining the UN Sustainable Development Goals with the materiality matrix prepared by the Japanese Holding Company, identified 10 SDG targets as drivers for its sustainability strategy from FYE2022 to FYE2026 in these key areas:

<p>Climate Change / Innovation and Technology</p> <p>Carbon neutrality Energy renewable sourcing</p>	<p>People</p> <p>Human capital. Employee engagement Diversity and Inclusion Stakeholders and communities</p>
<p>Environmental</p> <p>Environmental management Productivity program Use of resources - water Waste management</p>	<p>Ethics and Compliance</p> <p>Governance Bodies Human rights ESG risk management Sustainability reporting certification Product Carbon Footprint certification Procurement. Supplier ESG engagement</p>
<p>Safe Operation</p> <p>Health and Safety Customers and product safety</p>	

Nippon Gases Europe Mid-term Sustainability Plan taken from the Sustainability Report 2022 of Nippon Gases Euro-Holding S.L.U.

Together with these 10 SDG targets, Nippon Gases Europe has committed to 31 medium-term SDG targets, set by the Sustainability Committee and covering the top priorities of the Japanese parent company's materiality matrix. In fact, in January 2022, the Nippon Gases Europe Sustainability Committee approved the Nippon Gases Europe Mid-Term Sustainability Plan FYE2022 - FYE2026. This plan describes the purpose, governance and process of identifying initiatives. The medium-term plan was defined in line with NSHD's medium-term business plan. The European Sustainability Committee reviews progress on sustainability targets at its quarterly meetings. Therefore, starting with the publication of the Sustainability Report 2022, Nippon Gases Europe will replace the current 18 SDG initiatives with those defined in Nippon Gases Europe's medium-term sustainability plan FYE2022 - FYE2026.



While this commitment to sustainability was originally developed to continuously improve our reputation and create value, NGE now sees sustainability as a cornerstone of our corporate strategy. In accordance with what has been defined by Nippon Gases Europe, Nippon Gases Italy is also committed to developing its own sustainability action plan, starting from the main areas of intervention identified by the European parent company and identifying specific programmes and initiatives instrumental to achieving sustainable development objectives. These initiatives are on top of the reporting activities that Nippon Gases Italia has been carrying out on a voluntary basis for a number of years, integrating them into a general vision that reflects the Group's vision with respect to the major challenges that will shape the next few years.

Iñaki Uriarte

Sustainability, Health, Safety Environment
and Quality Nippon Gases Euro-Holding Director
Nippon Gases Euro-Holding S.L.U.



How sustainability is becoming a strategic cornerstone

We're here for the Nippon Gases Sustainability Report 2022 and as Sustainability, Health, Safety, Environment and Quality Director, it seems appropriate to make you our first interviewee! Tell us about some of the company's sustainability highlights over the last 12 months.

Absolutely, thanks - let me highlight our top Nippon Gases sustainability activities that we accomplished during this year (FYE2022).

One key area has been the increased coordination with our parent corporation, NSHD, in Tokyo while defining the mid-term strategy and targets.

In Europe, sustainability is managed by the Sustainability Committee and led by our President, this coordination has proven to adapt to the very changing demands of our society.

We have also participated in the renewal of the corporation's materiality matrix, which with the dual entry combines our business priorities with our stakeholders' interests, and provides a clear view of priorities for the initiatives we should focus on.

You mentioned adapting to changing societal demands, but how do you identify these and measure against them?

We continue to assess and adapt to changing scenarios, and I can state that our engagement with third-party sustainability-related organisations is helping us to identify new opportunities to improve our sustainability journey together with our stakeholders. This year we engaged with Ecovadis as a European organisation and we were honoured with the Gold Medal award, which recognises Nippon Gases as being in the top 5% of performers in our industry in the areas of environmental, labour and human rights, ethics, and sustainable procurement. We also coordinated our efforts and have a common European position in the Responsible Care management system with all European countries participating to the safe management of chemicals throughout their lifecycle.

And we enrolled in the United Nations Global Compact, presenting our Communication of Progress and passing the organisation's requirements.

All of these third party schemes help to reinforce our sustainability strategy and highlight opportunities for improvement.

On that note, how can Nippon Gases continue to expand its journey in sustainability?

Well, the company's Sustainability Committee has approved the Nippon Gases Sustainability Mid-term plan FYE2022 - FYE2026 with 31 initiatives identified, which are disclosed in Nippon Gases Europe Sustainability Report. Not only does this expand our number of initiatives, but their definition has been coordinated with the NSHD strategy and provides a solid guidance for our sustainable activities.

One area of paramount importance is the new carbon neutrality programme to help customers to reduce their emissions. Also among the identified initiatives is the strategy to increase our renewable energy share and our commitment to GHG emissions reduction by 35% in FYE2029.

All of these third-party schemes help to reinforce our sustainability strategy and highlight opportunities for improvement.

And as a response to customer demands, Nippon Gases has developed a Product Carbon Footprint initiative too, providing a clear view of the impact of our products in their respective supply chains.

Looking at the future, I see steps ahead to follow the new European Corporate Sustainability Reporting Directive (CSRD), which reinforces business decisions in terms of human rights, climate and environmental impact. We might also envisage integrating the European Taxonomy Regulation into our sustainable investments analysis.

Interview taken from the Sustainability Report 2022 of Nippon Gases Euro-Holding S.L.U.

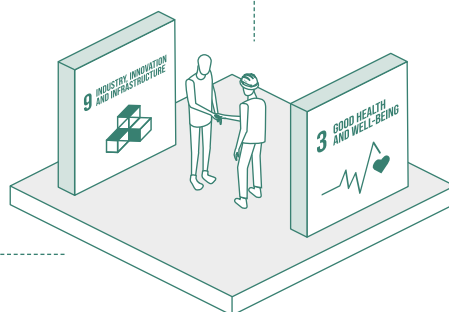
Our stakeholders

Nippon Gases Italia works actively with different stakeholder groups through its daily activities and establishes strong, lasting bonds. Moreover, Nippon Gases Italia believes that the success of its long-term value creation strategy hinges on making its stakeholders part of it and sharing with them the principles that underpin this strategy.

Regular, ongoing dialogue between Nippon Gases Italia and its parent company Nippon Gases Euro Holding allows the sharing of best practices and high-level knowledge.

Public and Private Customers

In order to respond effectively to the most diversified needs, Nippon Gases Italia establishes an on-going dialogue with its customers by participating in sector fairs and public events, and by providing customer satisfaction surveys and questionnaires.

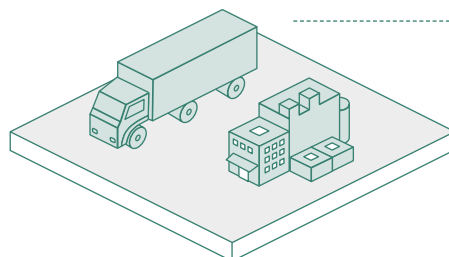


Employees

Nippon Gases Italia is committed to maintaining a direct relationship with its employees through constant dialogue and periodic involvement in training and informational activities, including through the Group's and the Company's intranet (WeShare and WeConnect).

Patients

Nippon Gases Italia undertakes to contribute to the health of patients, a condition that is deemed essential by Nippon Gases Italia Group, which always puts people and their needs at the centre.

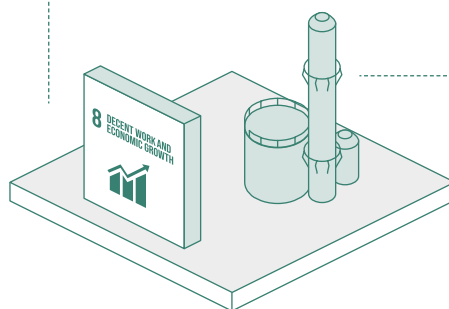


Suppliers and Partners

To supply and support its customers, Nippon Gases Italia works with a wide network of qualified suppliers on a daily basis, requiring the same level of safety, quality, and conduct it demands from its employees. To this end, suppliers and collaborators are periodically invited to take part in training sessions and structured meetings, where to share new ideas in a perspective of continuous improvement.

Local Communities

To Nippon Gases Italia it is essential to maintain a dialogue with the territory and embark on a path of joint growth, promoting the sustainable development of the entire community. Nippon Gases Italia Group has conducted numerous engagement activities in the territories in which it operates, from support for local authorities to guided tours of the plants and specific collaborative projects with schools and universities.

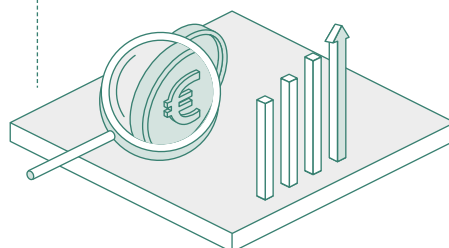


Industry Associations

Nippon Gases Italia actively collaborates with numerous industry associations, such as Assogastecnici, Federchimica, and Unione Industriale for sharing best practices and guidelines at the national level.

Authorities and Official Control Bodies

Nippon Gases Italia believes that total transparency and compliance with current regulations is essential and is committed to establishing partnerships with local authorities to promote research and innovation initiatives.



Nippon Gases Italia's materiality analysis

For the preparation of the first Sustainability Report (FYE2020), Nippon Gases Italia conducted a materiality analysis, adopting the guidelines of the Global Reporting Initiative (GRI), the most prevalent international model for drafting sustainability documents as well as an international reference.

The analysis was confirmed during the preparation of this Sustainability Report. An analysis was conducted to identify Nippon Gases Italia's material topics.

These are the topics of major importance that reflect the reality of the company and its subsidiaries in terms of impacts on the economy, the environment, society, and that may affect (or actually affect) the decisions, the actions and the behaviour of the stakeholders and the company.

In particular, materiality represents the threshold beyond which a topic becomes sufficiently important to be reported in the Sustainability Report.

Governance

VALUE GENERATION AND DISTRIBUTION TO STAKEHOLDERS

Nippon Gases Italia contributes to the development of the economic fabric in the regions it operates in, generating value that is distributed to various stakeholders, creating indirect economic impacts.

COMPLIANCE, ETHICS AND BUSINESS INTEGRITY

Nippon Gases Italia operates in compliance with the laws and regulations in force, renewing its commitment to business ethics, integrity and social responsibility on a daily basis. The Company condemns corruption, child or forced labour, protects respect for human rights, and promotes fair, transparent, and correct behaviour.

People

WORKERS' HEALTH AND SAFETY

Nippon Gases Italia provides its employees with a safe workplace, where the procedures and safety management programmes put in place have been defined through an assessment of risks and possible accidents within the organisation and along the entire supply chain, so as to disseminate a solid safety culture.

PROFESSIONAL DEVELOPMENT OF COMPANY EMPLOYEES

For Nippon Gases Italia, investing in the professional growth of its employees means to contribute actively to their development by promoting and reinforcing their skills, guaranteeing high-quality training, higher performance ratings and career progression.

ATTRACTING AND RETAINING EMPLOYEES

Nippon Gases Italia is committed to attracting the best talents and involving future generations to work together with a single mission: improving the future through gases.

DIVERSITY AND INCLUSION

For Nippon Gases Italia it is essential to ensure a working environment where diversity is regarded as an asset that fosters the professional growth of Nippon Gases Italia Group. Therefore, the group strongly condemns any kind of discrimination in employment or other working conditions and actively promotes diversity and equal opportunity.

Product and Customers

INNOVATION, RESEARCH AND DEVELOPMENT

Nippon Gases Italia is committed to continuously improve the performance of its products, services and production processes from the standpoint of their impact on the environment, also by assisting its customers with their research and development activities.

HEALTH AND SAFETY OF CUSTOMERS AND COMMUNITIES

Guaranteeing the health and safety of its employees and workers operating at Nippon Gases Italia Group's sites is an essential condition for Nippon Gases Italia. No less important is to guarantee the health and safety of customers consumers, the communities and territories where the company operates.

QUALITY OF PRODUCTS AND SERVICES

For Nippon Gases Italia, ensuring the highest quality of the products and services offered to its customers is of primary importance.

Environment

ENERGY EFFICIENCY

To reduce its environmental impact, Nippon Gases Italia is committed to limiting energy consumption, favouring efficient energy solutions and spreading a culture of energy savings within the Company and beyond.

GHG EMISSIONS AND CLIMATE CHANGE

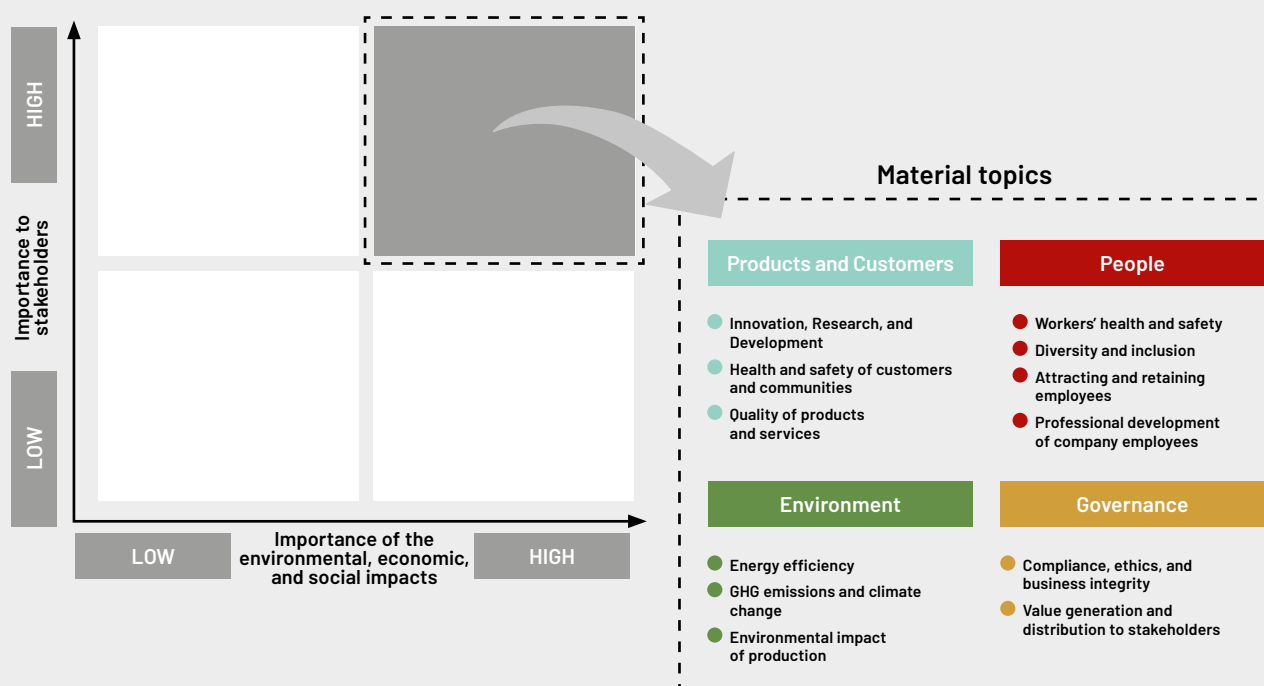
Nippon Gases Italia is committed to containing GHG emissions deriving from its own activities and those of its suppliers, including during the transport phase, with the aim of reducing the impact on climate change.

ENVIRONMENTAL IMPACT OF PRODUCTION

Nippon Gases is committed to pursuing sustainable management of waste in all stages of production, maximizing its recovery where possible.

**To identify its material topics,
Nippon Gases Italia has:**

1. Carried out an analysis of their external relevance, from which it obtained sufficient elements to identify the sustainability themes that affect Nippon Gases Italia Group activities. This selection was preceded by an analysis of sustainability macro trends at global level and trends relating to the chemical industry, as well as by a benchmark analysis that examined the topics addressed by the main competitors and similar realities.
2. Carried out an analysis of their internal relevance, during a workshop where the Company Management assessed the relevance of the topics identified previously. During this workshop, participants ordered the sustainability topics by importance, providing the organization's internal point of view. This evaluation also examined Nippon Gases Italia's contribution on the economic, social, and environmental impacts of each topic.
3. Defined the materiality matrix of Nippon Gases Italia, worked out by positioning in the different quadrants the sustainability topics identified by Nippon Gases Italia Group's internal and external players. The organisation's internal viewpoint that emerged during the workshop is plotted on the horizontal axis while the arrangement relative to the vertical axis reflects the viewpoint outside the organisation as defined during the context analysis. At the top right we find the topics deemed most relevant by internal and external players alike, which therefore are considered material topics.







2. Proactive

Being much more than just a gas supplier means putting our customers at the centre of everything we do, proactively seeking the best technological offerings that range from the most efficient supply options to tailored applications technology solutions.

That can only be achieved by constantly and proactively improving safety - our company's number one priority - in our operations and at customer sites.

What's more, **Nippon Gases** as a company, and each of our employees, managers and directors, as individuals, proactively strive to be ethical in all our activities, achieving compliance excellence through continuous training and every employee living our Code of Conduct.

2. Proactive

2.1 Our Governance

Corporate governance bodies

Board of Directors

The Holding Nippon Gases Italia S.r.l. is led by a Board of Directors that is responsible for the management of the Company. As of March 31st, 2022, the Board of Directors of Nippon Gases Italia S.r.l. consists of five members in office until revocation or resignation, and eligible for re-election: a woman over 50 years of age and four men, one of whom is between 30 and 50 and three of whom are over 50 years of age.

Supervisory body

The supervisory body consists of a Sole Auditor, and it is responsible for supervising compliance with law and statutes, and compliance with principles of sound administration. In particular, the supervisory body supervise the adequacy of the Company's organizational structure, the compliance of the internal control system and the accounting and reporting system, as well as the reliability of the organizational structure for correctly representing management operations. Nippon Gases Industrial S.r.l., Nippon Gases Operations S.r.l., Nippon Gases Pharma S.r.l. and Nippon Gases Refrigerants S.r.l. 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, and the Sole Auditor supervises them.



The members of the Board of Directors of Nippon Gases Italia S.r.l.



Raoul Alessandro Giudici
President
CEO and Legal Representative



Eduardo Gil Elejoste
Member of the Board



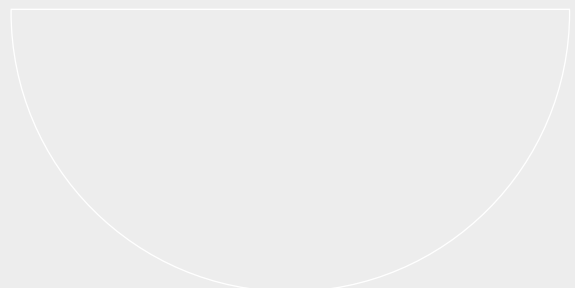
Justin Miguel Johannes Corcho Maters
Member of the Board



Todd Kuroiwa
Member of the Board



Laura Zanotti
Member of the Board



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.” *(Code of Conduct)*



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

- All compliance breaches can be prevented
- Compliance is the responsibility of line management
- Every employee is responsible for her/his 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

The Nippon Gases Europe **Code of Conduct** is valid for all subsidiaries, including Nippon Gases Italia. It lays out the general principles the Nippon Gases Group follows while doing business.

All the activities performed by Nippon Gases Group are carried out according to the principles of transparency, correctness and loyalty. The Code is directed toward all employees, managers, and directors of Nippon Gases Group, but also sub-contractors and temporary workers.

Nippon Gases Italia makes sure that the principles of ethical conduct are promoted along the entire value chain, requesting customers and suppliers to pay the utmost attention to professional integrity.

With a view to constantly promoting a culture of compliance, the Group envisages several initiatives, including the annual recertification of the Code of Conduct.

As part of this process, employees are asked to confirm that they have read and understood the Code of Conduct and to answer certain questions about its contents.

October also saw Compliance Commitment Week 2021, a Europe-wide coordinated initiative to maintain a high standard of engagement by all employees on compliance issues.

The initiative, in its second year, is focused on the topics of cybersecurity, IT control standards and data protection.

Nippon Gases Italia Group communicates the principles of our Code of Conduct by sending to external partners and suppliers an integrity statement, which must be accepted before any type of collaboration can get underway. As described in the document, Nippon Gases Italia 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 every player it interfaces in performing such activities.

Nippon Gases Italia is also committed to ensuring fair competition at all levels of the production and supply chain. Nippon Gases Italia Group firmly believes that new business opportunities should be obtained solely on the basis of the products and services offered, in compliance with all antitrust and fair competition laws. Furthermore, the Group provides all employees with the Antitrust and Fair Competition Policy, which contains clear instructions and guidelines aimed at raising awareness among Group employees to adopt behaviour in line with anti-competitive principles and to prevent any violation.

The Nippon Gases Italia Group's strategic choices are based solely on public information and reasonable estimates. Likewise, with regard to import/export and global trade of products, the Group strictly complies with all regulations and internal procedures, and confirms the profile and description of its business partners in every export transaction.

Nippon Gases Italia guarantees the protection of all personal data used in the course of business activities, in full compliance with the General Data Protection Regulation. The Company seeks to prevent and remedy any lack, loss or damage of such information in its possession by taking appropriate security measures in compliance with its internal procedures and policies.

Nippon Gases Italia S.r.l. has its own **"Organization, Management and Control Model"** (MOGC), as provided for by Legislative Decree 231/2001, on the administrative liability of legal entities for crimes 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 and processes;
- the procedures for managing financial resources to prevent such offences from being committed;
- 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 is required to 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 MOGC 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 MOGC 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 S.r.l., Nippon Gases Pharma S.r.l., Nippon Gases Operations S.r.l., Nippon Gases Refrigerants S.r.l. and Nippon Gases Industrial Sud S.r.l., are also equipped with company-specific Organizational Models that align with the Nippon Gases Italia S.r.l. 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 achieve its goals of business integrity, Nippon Gases Italia relies on employee's collaboration: they are actively encouraged to report any suspicions and can anonymously report violations through several channels, including a dedicated hotline and the e-mail address compliance@nippongases.com. All reports and related analysis are managed with the utmost confidentiality to ensure that the persons involved do not receive any unfavourable treatment.

The investigations to be undertaken following compliance breaches and Code of Conduct violations are regulated by 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.

It should be noted that during the last three years, no reports have been received in Italy that resulted in the verification of violations of the Code of Conduct.

Specifically for FYE2022:

- Confirmed incidents of ethics/corruption and/or antitrust issues: 0
- Public lawsuits related to corruption and/or antitrust issues: 0
- Reports of human rights violations: 0
- Reported cases of discrimination/harassment: 0
- % of employees who have received training on the code of conduct: 100% (*); the employees involved were 480.

(*) Selected categories of employees of Nippon Gases Italia Group

Laura Zanotti

Compliance Officer, Legal and Sustainability Director

Nippon Gases Italia



Tell us about your compliance programme

Nippon Gases Europe's compliance programme is also adopted in Italy and includes multiple mandatory and non-mandatory measures. As an example of our disciplined approach, in FY2022 we completed our annual recertification process through which our employees confirm that they have read and understood the Code of Conduct.

Furthermore, to further strengthen our compliance culture, we take additional measures, such as regular information on it and specific training aimed at raising awareness with regard to the Code of Conduct.

In addition, every two years, we organise Compliance Commitment Week, during which we devote special attention to a specific theme. This year's theme was cybersecurity. The reason for this lies in the fact that daily routines for many people were subject to profound changes at the onset of the Covid-19 pandemic. Many employees, in particular, started to work remotely.

This development poses increasing compliance challenges as, in these unprecedented circumstances, the risks of direct cyber-attacks on IT systems, phishing via e-mail or indirect attempts via our partners have increased.

Thus far, we at Nippon Gases have been able to protect ourselves. In the last fiscal year, we recorded only one group-wide cyber-attack, which was unsuccessful, but we are aware that going forward is likely to be an increase in these attempts, both in terms of numbers and sophistication.

This is also why monthly phishing tests are launched for the entire corporate population, with the aim of testing their ability to detect a hacker attack, should one occur.

We can proudly say that the phishing test results in the last year have significantly improved compared to the previous one.

How are compliance and sustainability interconnected?

Regulatory compliance, social responsibility, sustainability are intimately linked and interdependent concepts. In order to achieve environmental, social and governance sustainability objectives, the company cannot neglect compliance with the legal regulations that govern its operations and activities.

Furthermore, in addition to legal regulations, companies are also required to comply with contractual and voluntary obligations towards their customers, suppliers, and stakeholders, from which requests often come to adapt to standards and models of conduct that are stricter and more rigorous than those required by law.

At Nippon Gases Italia, we have built our reputation not only as a supplier of industrial, food, medical and specialty gases and their applications, but as a strategic and reliable partner; that is why winning and reinforcing the trust in us from customers, suppliers, investors, shareholders and the communities in which we operate is our top priority.

Finally, we understand sustainability as a path of transformation that goes beyond the green transition, and involves society, companies and people with the goal of building a future of structural growth while preserving the planet for future generations.

How do you achieve these goals within the organisation?

We firmly believe that compliance measures alone are not enough. To effectively monitor regulatory compliance, it is important that each corporate organisation shares with all its employees, regardless of roles and positions, a training programme aimed at creating maximum awareness, as well as widespread knowledge of the rules to ensure the correct implementation of measures.

We believe that compliance, as well as safety, is a matter of discipline and hard work, and training is an essential part of it.

With this in mind, we have implemented an effective compliance programme that is reflected in a strong and sustainable compliance culture, which is very well integrated throughout the organisation, with the aim of minimising the risk of any kind of violation that could have serious consequences for the company and result in considerable reputational damage and high fines.

By adhering to compliance rules, we not only protect the integrity of employees, customers, and business partners, but also protect our company from negative influences.

2.3 Our management systems



Nippon Gases Italia has adopted certified **Management Systems** according to the most widespread voluntary international standards in order to guarantee continuous improvement in the areas of Health and Safety, Environment, Food Safety and Quality, and to pursue strategic objectives with greater efficiency:

- analyse and assess the risk of accidents in relation to legislative provisions, adopt measures to prevent injuries and occupational diseases, guaranteeing the safety of workers, the general population, and 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;
- 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 production 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 facilities and plants to ensure the Safety and Health of people and the protection of 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;
- monitor performance indicators and establish goals for the ongoing improvement of Company processes.



To its employees, customers and suppliers, Nippon Gases Italia guarantees a constant commitment to improve its Quality, Health, Safety and Environmental systems and, to this end, over the years it has obtained and maintained the following certifications of the main facilities.

Safety and Environment*

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

(* See section 3.3, "Management of environmental issues" on page 70 for full details.

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), and Verres (AO) sites
- ISO 13485:2016 Certification
- Labelling certification in accordance with Directive 93/42/CE and according new Regulation 2017/745/EU where applicable (Medical Devices)
- Labelling certification in accordance with 2014/68/EU (PED) for pressure equipment
- Labelling certification in accordance with 2010/35/EU (TPED) and current ADR regulations for transportable pressure equipment
- ISO/IEC 17025:2018 accreditation for the Chivasso (TO) laboratory
- Kosher certification for the Castelnuovo Berardenga (SI), Rapolano Terme (SI) and Ferrara sites.

Maintaining these certifications involves a significant commitment of resources and over 110 audits each year at the Nippon Gases Italia Group sites, including both internal and third-party audits.

The goal of Nippon Gases Italia 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.

All Nippon Gases Italia CO₂ manufacturing sites are **Kosher** certified, in order to satisfy more fully the requirements of some important customers. Moreover, in view of the characteristics of its production processes, **Halal declaration** may be issued as well.

As part of its drive to increasingly digitise its services, Nippon Gases is continually looking for effective and innovative technological solutions that can support it in achieving its health, safety, environmental and quality objectives. The new European Database that was implemented this fiscal year, perfectly meets these needs.

The application is a valuable tool for the management of internal and external safety, environmental and quality accidents, starting from their identification and analysis through to their complete resolution.

The project was developed by a European Core Team with the support of a few representatives from each country and the participation of an external company, which took care of the integration of the software with Nippon Gases' processes.

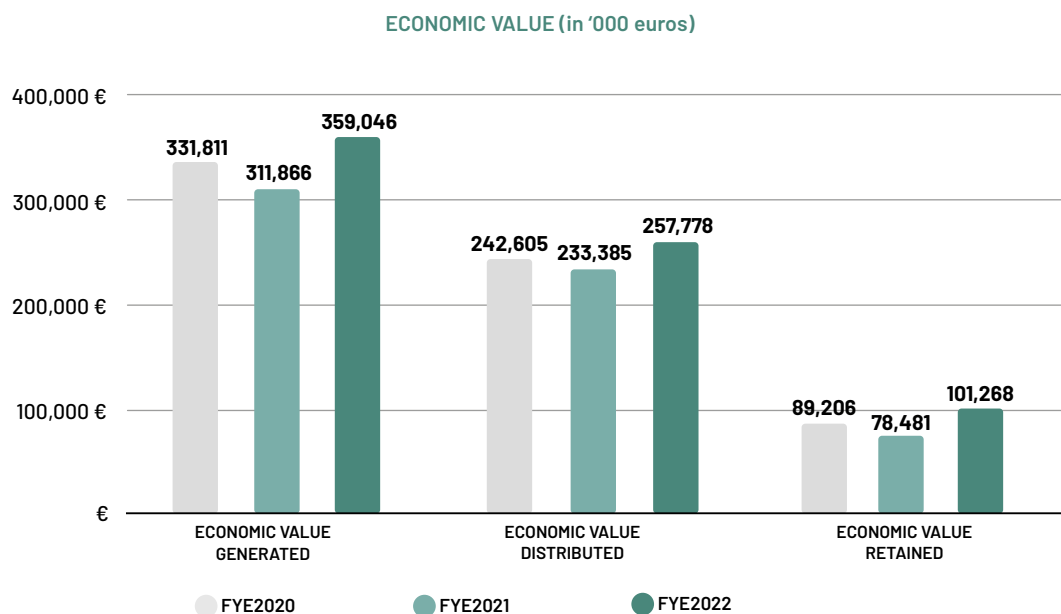
The objective is to ensure the continuous improvement of our products and processes, through actions to eliminate the causes of existing or potential problems, sources of complaints or non-conformities, with the ultimate goal of increasing customer satisfaction.



2.4 The value generated by Nippon Gases Italia

During FYE2022, Nippon Gases Italia generated economic value of 359 million euros, a slight decrease compared to the previous year (+15% compared to the approximately 311.9 million euros generated in FYE2021).

Of the 359 million euros generated, 257.8 million euros (i.e., 72% of the total) were distributed to the various groups of stakeholders, and the remaining 28% (i.e., about 101.3 million euros) was retained by the company.



In more detail, of the 257.8 million euros of economic value distributed, 226 million was allocated to suppliers, mainly in the form of costs for services and raw materials. Employees were paid about 37.2 million euros, this amount included all other cost items related to personnel management. 2.3 million euros was disbursed to capital providers through interest and other financial charges. The value distributed to the local community amounts to 356 thousand euros including donations and membership contributions.

ECONOMIC VALUE DISTRIBUTED (in '000 of euros)

	FYE2020	FYE2021	FYE2022
Value distributed to suppliers	196,105	191,592	226,042
Value distributed to employees	35,243	35,045	37,161
Value distributed to capital providers	2,510	2,828	2,318
Value distributed to Public Administration	8,430	3,562	-8,099
Value distributed to the local community	317	358	356
Total	242,605	233,385	257,778

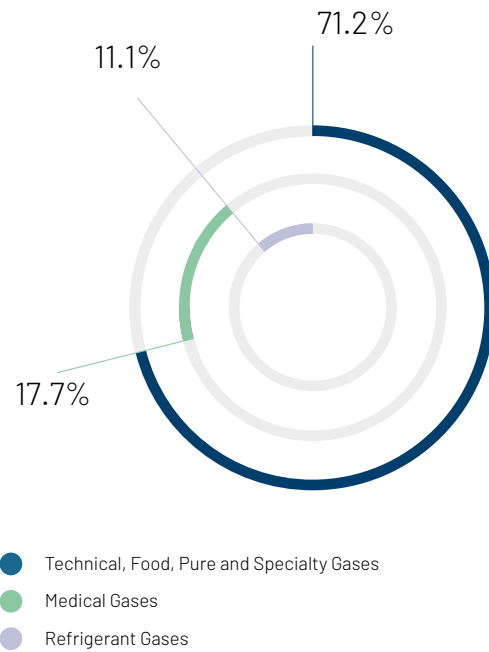


2.5 Our markets

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 Italia are:

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





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

To the **food industry**, Nippon Gases Italia makes available a full range of certified food-grade gases and technologies for the improvement of food and beverages production processes. The customised solutions provided to the customers are aimed at increasing productivity, making production more efficient and improving food quality in compliance with food safety regulations. This is accomplished by developing innovative applications and technologies and continually refining systems.

Nippon Gases Italia can satisfy the most diverse needs of its customers, in complete respect for the environment, with its wide range of gas products and mixtures for food use, as additives, adjuvants and ingredients.

Nippon Gases Italia is Italy's leader in the production of Carbon Dioxide, deriving from various sources.

This includes Carbon Dioxide of geothermal origin, sourced from natural deposits located in Toscana and



Carbon Dioxide of chemical origin, produced in the industrial centre of Ferrara, Emilia Romagna.

In the **chemical and automotive industries**, Nippon Gases Italia is constantly striving to offer solutions that ensure process improvement, achievement of environmental goals and reduction of production costs for all customers. The production quality and know-how gained over the years with the Nippon Gases Europe have allowed Nippon Gases Italia to establish itself as an ideal partner in the **metallurgical sector**. Nippon Gases Italia provides products and services that help lower costs, improve energy efficiency and productivity, and offer environmental advantages.

The **line of Pure and Specialty gases** finds its main application in instrumental analysis and calibration, scientific research, special high-tech processes, the electronics industry and in chemical-pharmaceutical processes, where certified high purity gases are supplied. Time-honed expertise, dedicated production lines, accredited analysis laboratories, and complete, customizable supply systems make Nippon Gases Italia a leader in the supply of Pure and Specialty Gases, materials for their use, and the construction of distribution systems. Designed to meet a growing global demand for certified pure Methane, the **Methane** purification system in operation at Chivasso plant represents the only source of pure Methane in Europe. It is able to continuously produce any degree of purity, up to grade 6.0 (equivalent to a purity >99.9999%).

During the year, the Group focused on the research and development of two pure gases in particular: **Hydrogen** and **Helium**.

Regarding the first one, which represents a key lever in view of the transition to carbon neutrality goals, the focus is on technologies that could enable its production from renewable sources, as to make Hydrogen a substitute for fossil fuels in manufacturing processes, without causing any emission of CO₂ in the atmosphere.

On the other hand, the Helium results in the most strategic and rare among the specialty gases, thus also expensive due to supply difficulties.

The group developed partnerships with companies specialized in Helium treatment in order to recover, purify and reuse any gas leakages and waste. Nippon Gases Italia will make these systems available to customers interested in such technologies by developing tailored solutions.

In addition to pure gases (Nitrogen, Argon, Methane, Carbon Dioxide, Hydrogen and Helium), Nippon Gases Italia provides also calibration mixtures produced with high-purity gases, according to strict safety and quality standards and using technologically advanced mixing systems.

In health care field, the Group manufactures and commercializes medicinal gases that conform to the European Pharmacopoeia and are provided with the Marketing Authorization. The high quality ensures maximum efficacy in the therapeutic field, guaranteeing safety for both patients and health care providers.

In particular, the drug Oxygen is the most widely used gas in the **health field** and has played a key role in the fight against Covid-19. In addition to the gas supply, Nippon Gases Italia offers a wide range of services and applications for healthcare facilities, as to provide solutions that promote safer environments and improve patient's care. Moreover, the Group offers maintenance programs for medical gases facilities, including periodic inspections, preventive maintenance work, service system verification, services of facility design, decontamination, training courses and medical gas analyses.

Through the HomeCare division, Nippon Gases Italia ensures the domiciliation of therapies with liquid and gaseous Oxygen and the mechanical ventilation in service to patients assisted in their homes.

HOME MEDICINE

Home Medicine, the e-Healthcare Company, is a company specialized in the dispensation and organization of home care activities associated to telemedicine services, with the goal of monitoring, anytime and anywhere, patients with complex clinical needs, multicronicity and fragilities. Home Medicine represents the Scientific, Technological and Organizational provider for those interested in delivering or being provided of integrated healthcare in Italy. This combination allows to monitor the compliance to therapy and to medical prescriptions, aiming to strengthen patient empowerment and ensuring equity of care for all assisted patients. The use of telemedicine tools is intended to promote a better interaction between the local area and reference medical facilities, thus reducing the necessity of travel for frail and often elderly patients. Furthermore, telemedicine ensures the connection between different specialization centers, the interaction with the equipment at the patient's home, the assistance in remote or isolated areas by promoting intervention during emergencies. It is also possible for the patient to self-monitor, hence reducing the frequency of hospitalizations due to worsening symptoms, decreasing costs and improving therapeutic efficiency.

Home Medicine offers a whole health care package with the help of both technological systems (APP, Web-based platform, digital medical records, remote monitoring of parameters, tele-examinations, etc.) and professional caregivers directly at patients' homes. The Home Medicine Operative Center provides support to the health care team (physicians, nurses, physical therapists, etc.) and to patients (and their care-givers) regarding IT services and telemonitoring kits. The service operates on multiple assistance levels to remotely support the resolution of any issues as well as to provide training/information about the devices and the ways of using the systems.

Nippon Gases Italia is also at the forefront with advanced telemedicine systems, which allow the monitoring of parameters and remote medical screenings.

Nippon Gases Italia has been operating in the **field of refrigerant gases** for many years, with a high level of professionalism and expertise.

A long-term partnership with Chemours, Honeywell, Daikin and Arkema, the main producers of fluorinated gases, has allowed Nippon Gases Italia to develop a deep knowledge of the refrigeration and air conditioning industry. For over 70 years of activity, Nippon Gases Italia has been on the cutting edge in providing the most efficient technological solutions and products with the lowest environmental impact. Throughout a broad sales network, Nippon Gases Refrigerants is specifically involved in the business of refrigerants gases and operates quickly and efficiently all over Italy, offering a complete range of products and solutions in accordance with the latest environmental protection regulations.

The long-standing experience in the refrigeration 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.

Refrigerants are a special hazardous waste (EWC 140601), and it is forbidden to disperse these gases into the environment. Therefore, refrigerants must be recovered according to legislation and then disposed of or reclaimed by specialized companies.

Nippon Gases Refrigerants offers the **Easy EcoStar™** service, providing complete assistance for the recovery and treatment of refrigerant gases:

- provision of containers labelled in accordance with the law;
- collection of containers with authorized means of transporting waste;
- chemical analysis to characterize the waste;
- reclamation of the containers (also proprietary containers);
- regeneration of exhausted gases;
- final disposal if the product cannot be regenerated.



Business Directors

Davis Reginato

Bulk, On-site & Carbon Neutrality Director



The international economic situation in recent months has been characterised by an exceptional rise in the prices of raw materials and energy specifically, which has become even more significant in the wake of the Russian-Ukrainian conflict, causing consequences for the Italian industrial sector. This scenario is closely linked to the global price of fuels and energy and the price of emissions. In fact, a cap is set on the total amount of some greenhouse gases that can be emitted by certain types of installations and this cap is reduced over time so that total emissions decrease. The European ETS market for pollutant gas allowances (mainly CO₂) is the instrument to fight climate change and reduce greenhouse gas emissions.

Nippon Gases Italia, like many other companies, found itself in the position of having to implement various actions to counter the negative effects of energy and fuel price increases, promoting energy transition and sustainability.

As for the Bulk business, there are many initiatives that the Group has been developing for several years now to help customers reduce their impact on the environment, especially in the areas of combustion, wastewater treatment and thermal treatment of materials.

In this last sector alone, Nippon Gases Italia offers a cutting-edge solution to improve the impact in terms of the sustainability of their activities through Endogreen™, an innovative endogas generator of the latest generation that uses a non-toxic catalyst based on noble metals. Thanks to its modular design, patented in 2013, it adapts to the customer's needs, eliminating the consumption of cooling water and, by virtue of a dual heat recovery system, triggers a virtuous circle

that enables reduced methane consumption and emissions. It is only with a proactive approach and the right technology that we can provide gas-related solutions that enable our customers to achieve their goals of decarbonising their production processes, knowing that optimising them in terms of energy and water efficiency leads to an improvement in their environmental impact. We have also signed important agreements to ensure the supply to our customers of products made in plants using only 100% renewable energy.

Finally, in 2022, in cooperation with Nippon Gases Europe, we started a carbon neutrality journey. This is the Carbon Neutral World initiative, shared by all companies that are part of Nippon Sanso Holdings Corporation (NSHD), and aims to reduce the carbon footprint. All our customers are actively working on the transition to renewable energy and the circular economy, using our advanced technologies, and thanks to our 100 years of experience, we want to help make this transition a reality.

"Think globally, act locally" is the watchword of this initiative, which aims to provide the most suitable solution to meet the needs of customers in different European countries.

Eduina Marino

Medical Business Director



The main goal of Nippon Gases Pharma's business is to improve the health and life quality of patients; in this context, our philosophy allows us to be perfectly aligned with our 3rd goal of the 2030 Agenda, which states, "To achieve sustainable development, it is essential to ensure healthy living and promote the well-being of everyone at all ages." Thanks to our products and services, we can support patients by providing care everywhere from

the hospital to their homes. We have an ever-increasing focus on home care, an area in which our business has received a special boost from both the intensification of home oxygen therapy and the recent integration of telemedicine services following the birth of Home Medicine. The opportunity to monitor patients remotely reduces travel, with important repercussions both in terms of service efficiency and cost savings for healthcare, while at the same time limiting not only the number of kilometres travelled, but also the quality of the service offered. We are the reference point for hospitals to which we supply medical gases in accordance with the European Pharmacopoeia, (oxygen, synthetic air, carbon dioxide) and cryogenic gases for cryotherapy and cryopreservation, as well as turnkey distribution systems and on-site support services with our own staff who works with physicians and health care providers.

In addition to the traditional products, we also offer new products for the treatment of specific diseases, ready-to-use solutions for first aid, ambulance, and emergency medicine departments, such as small oxygen cylinders with integrated flowmeter, the drug Rivonox® for inhaled nitric oxide therapies, the drug NinoXan® for conscious sedation, and the Heliox mixture for the treatment of patients with severe middle and upper airway breathing difficulties, to name only a few examples.

We are also able to offer dedicated services and innovative solutions that guarantee safety and quality. One example is Eisei, a unique continuous air treatment system that reduces the risk of contagion while maintaining and improving air quality in closed environments such as waiting rooms in healthcare facilities and the Noxtec medical device, which enables continuous monitoring and controlled dosing of inhaled nitric oxide therapies to patients with acute pulmonary hypertension in conjunction with severe respiratory distress or critical cardiac disease, as happened during the recent pandemic, where these devices not only saved many lives but also supported physicians in treating Covid-19 patients.

In short, we want to help create a model of healthcare closer to the patient that can help improve the efficiency of our healthcare system, always working to minimise our impact on the planet by optimising our operations to reduce CO₂ emissions, water consumption and waste generation.

Paolo Tirone

Specialties Business Director



The Nippon Gases Italia Group's Specialties Business includes pure and specialty gases used for industry and research activities on the one hand and refrigerant gases used for refrigeration systems and air conditioning on the other, which are a speciality of Nippon Gases Italia's business compared to the European Group.

Regarding pure and specialty gases, we are promoting the use of reusable containers, even those with a small capacity (1 litre), which can therefore be filled as often as our standard containers. In this way, we are contributing to the circular economy by reducing the waste produced due to disposable containers.

With this in mind, we are working relentlessly on projects to optimize and recover our pure gases in order to improve manufacturing processes sustainability, to optimize available resources and decrease CO₂ emissions due to product transportation. Furthermore we have implemented digitalisation projects to eliminate paper and make all necessary documentation available to our customers in electronic format.

For Refrigerant Gases, we have always been at the forefront when it comes to providing efficient technological solutions and products that offer the lowest environmental impact.

Thanks to the introduction of new-generation refrigerant gases with a low GWP (HFO and natural gases), in replacing HFC (old-generation refrigerant gases) with very high GWPs, we were able to reduce the emissions of customers by more than 344,500 tons of CO₂ equivalent in the period from 2016 until 31st March 2022. We're increasing our activities focused to reduce our customers' energy consumption through, among other things, choosing the correct refrigerant gas for each

type of use, thus contributing significantly to the reduction of indirect CO₂ emissions from energy consumption.

The results show that our customers also share with us the goals of safeguarding the planet by reducing their environmental impact; in fact, with their commitment and choices they are collaborating in the implementation of this great change.

We will continue to work closely with national bodies, trade associations, designers, manufacturers, retailers and installers, and universities to provide the right support, the best products, and the most appropriate solutions to ensure the green transition of refrigeration and air conditioning.

Gian Luca Rocca

Packaged Gases Business Manager



The cylinder gas market encompasses many applications that help our customers achieve their sustainability goals. Think of CO₂ supply for carbonating water at 'water houses' that contribute to the reduction of non-biodegradable bottle plastics, or new welding mixtures that reduce fumes in production cycles. One technology that can be developed thanks to the proposals offered by Nippon Gases Italia and that provides important advantages for reducing food waste is the use of protective atmospheres to prolong the original characteristics of packaged food.

The taste, aroma, smell, and appearance of the product are maintained, as a suitable atmosphere reduces both enzymatic and biochemical degradation and bacterial growth. In addition to this, further benefits can be obtained, such as reduced costs, resulting from product spoilage and disposal, decreased operating costs, stemming from extended storage times and improved production planning.

Nippon Gases Italia offers not only a complete range of gases for packaging, but also a service in line with the needs of a constantly evolving sector, carefully evaluating the proposal of the appropriate gas or gas mixture for the preservation of specific types of food, thanks to innovative studies in collaboration with specialised research laboratories.

Tests are also carried out at the customer's premises to optimise the packaging processes and welding, to develop the most effective solution and thus provide the equipment and materials to ensure the best quality of production processes.

Nippon Gases Italia is also committed to reducing the distances travelled by its vehicles by increasing the volumes of gas contained in its containers thanks to 300 bar technology and the location optimization of its agencies, in order to reduce the kilometres travelled in transport and delivery process with a consequent reduction in emissions.

From this point of view, improvements can be made in all components of the cylinder gas supply cycle to make our world a better place, and Nippon Gases Italia wants to play a leading role in this process.

2.6 Solutions offered by Nippon Gases Italia

2.6.1 Technological applications of cryogenic gases

Nippon Gases Italia is able to offer its customers innovative and cutting-edge technologies to improve the sustainability impact of their production activities. In the field of material production and processing, an interesting example is **Endogreen™** an innovative, latest generation endogas generator that uses a noble metal 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 avoiding waste and unnecessary emissions. Endogreen™ does not use water but a high efficiency air-to-air heat exchanger; it also has a dual heat recovery system from the heat exchange air itself, triggering a virtuous circle that allows reduced methane consumption and emissions.

The number of new systems installed continues to grow thanks to extremely positive references from major industry players, growing by 15% in FYE2022.

In the steel/metal industry, oxy-combustion, or combustion using oxygen, in metal smelting offers numerous advantages over traditional combustion, such as:

- optimised and controlled heat transfer
- reduced specific fuel consumption
- a higher melting rate,
- reduced slag formation.

thus guaranteeing limited pollutant and smoke emissions, up to 70% less than with conventional combustion.

The numerous advantages translate into a considerable reduction in investment in new equipment and related installation and maintenance costs. Specifically, Nippon Gases Italia has developed several burners with oxy-fuel burners, making it an ideal partner for this type of application.

The **DiluJet® JL** is to this day the burner used by Nippon Gases Italia primarily in aluminium processes. This burner has been designed to cut down NOx emissions and ensure a high coverage of the bath surface, to foster the circular economy of aluminium.

In this way, in fact, there is the opportunity to increase the percentage of scrap (recovered aluminium) which is characterised by a strong presence of organic materials, thus exploiting its calorific power and consequently reducing the consumption of natural gas for heating, at the same time reducing carbon monoxide emissions in the chimney.

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

For smaller plants, Nippon Gases designed the **SansoJet® CM** burner which was conceived by Nippon Gases Italia 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 fitted to the furnace vault, it needs not be cooled by water, and enables energy to be released only when and where needed.

With the support of Nippon Gases Europe, Nippon Gases Italia can offer its innovative technology **SansoScan®**, for customer using of rotary kilns. This technology allows, through the colorimetric analysis of the flame in real time, the modulation of the oxygen supply, guaranteeing effective combustion control, avoiding energy losses and limiting CO emissions in the chimney.





To the **glass industry**, Nippon Gases Italia offers the OENR technology that makes for highly reduced NOx emissions, an aspect governed by ever-stricter regulations. Through a staged combustion approach, the technology can be implemented without major structural changes to the furnace, with the inclusion of oxygen lances, bringing 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 **Ozonolysis** technology supplied by Nippon Gases Italia makes it possible to minimise the problem of disposal of the sludge arising from biological processes, during 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 molecule, bacterial cells undergo a combined hydrolysis and mineralisation process. Nippon Gases has patented a special contact system



that makes it possible to maximise the effect of its ozone by increasing the reduction of sludge and consequently the environmental impact of purification processes. The technology is the subject of continuous interest and an increase in requests for applications from the industry.

Another solution proposed by Nippon Gases Italia consists of using carbon dioxide to control and neutralise the pH of aqueous solutions. Carbon dioxide is a valid alternative to strong mineral acids in neutralisation processes.

This technology makes it possible to do away with the risks and difficulties associated with the management of highly hazardous substances through the use of carbon dioxide, avoiding the use of chemicals that are harmful to the environment and would pollute after the release of the effluent into surface waters.

When it comes to the recovery of **Volatile Organic Compounds (VOC)**, Nippon Gases Italia can supply a wide range of systems and applications, enabling its customers to comply with the applicable regulations, optimise consumption and reduce emissions to a significant extent.

The solutions offered make use of the most advanced solvent abatement and recovery techniques. Solvents are widely used in chemical and pharmaceutical processes. Normally, to avoid emissions into the atmosphere they are burned, which generates CO₂ emissions and methane consumption. With the recovery systems offered by Nippon Gases Italia, the solvents are fully regenerated and can be reused, thereby reducing greenhouse gas emissions along the entire production chain.

Nippon Gases Italia provides customers with access to a network of specialists throughout Italy, to analyse and propose the best solutions, assessing the specific needs of each reality, and guiding the choice to increase productivity and significantly reduce rework. In addition, Nippon Gases, in offering innovative high-tech solutions, works to make its customers' processes more sustainable in terms of the environment and reducing CO₂ 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 distribution operations. The Department ensures the best possible service to customers according to signed contracts or orders.

Among the main indicators monitored by the Bulk Distribution Department, kg/km indicates how many kilos of product are transported for each kilometre travelled. 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 kilometres travelled. In FYE2022, the volumes of products distributed increased by 6.2% compared to the previous fiscal year, while the kilometres travelled increased by only +5.4%, showing that the kg/km indicators for the quantities of products transported improved compared to last year's results, reaching an average value for all products of 40 kg/km.

The bulk distribution process was optimised thanks to many specific activities implemented to streamline operational activities and kilometres travelled, resulting in a 3% improvement, which is a positive result given the difficult supply situation for some products, particularly carbon dioxide.

In pursuing a strategy of continuous improvement, Bulk Distribution has promoted numerous initiatives in different areas that have contributed to the achievement of the results described above.

In terms of logistics, the intermodal routes for the supply of products from Germany were lengthened, thus making it possible to increase rail transport to the Campania region instead of stopping as before in Lombardia, with a 0.4% reduction in total road mileage for this type of product.

In order to optimise logistics from the point of view of technological infrastructure, the pilot phase for the implementation of an innovative nitrogen delivery planning software was recently concluded. The software consists of two modules structured as follows:

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

During FYE2023, the project will be extended to cover the distribution of all cryogenic gases (oxygen, argon and carbon dioxide).

At the same time, the revamping of the ASU production plant in Pontinia made it possible to optimise the demand for products from southern Italy, resulting in a decrease in the transportation needed to reach customers and a reduction in the kg/km indicator.

So far, only technical gases have been produced at the Pontinia site. Documents and operational procedures are being prepared to apply for authorisations to produce food and medical gases. As soon as they are obtained, these gases will also be produced at the site in order to satisfy an ever-increasing demand and allow further efficiency improvements in the distribution process.

In order to minimise the distances travelled by our fleet, we have also promoted an optimisation of product sourcing from certain funds of co-producers. This collaboration further optimises the kilometres travelled and thus improves the impact on the environment.

As with every year, the 'tank resizing' project was carried out, which consists of increasing the size of the tanks installed at the most logistically critical customers in order to reduce the number of annual deliveries, thereby further decreasing the number of refuelling trips.

In order to minimise the impact generated by the transport of products and consequently alleviate logistical procedures, Nippon Gases proposed the introduction of on-site nitrogen production facilities at customer sites.

At present, this technology is mainly implemented for customers requiring high nitrogen supplies, but we do not exclude that in the future solutions may also be developed for smaller capacity plants.





2.6.2 Technological applications of compressed gases

Numerous are the technological applications offered by Nippon Gases Italia to customers that use compressed gases in cylinders and bundles.

In the welding industry, through a prompt analysis of customer processes, Nippon Gases Italia is able to propose the best shielding gas solution: the **Sanarc**[®] welding gas line. These gases improve performance in terms of process quality and productivity, reducing the time it takes for the electric arc to ignite by 10% on average. Using gases from the Sanarc[®] line in welding processes, reworking is reduced by 15%, which effectively cuts down energy consumption at customer sites.

Another example in the field of welding is the **SanCut**[®] brazing process. By using a combustible gas (acetylene or propane) in combination with a comburent gas (oxygen), a controlled high temperature flame is produced that can melt a metal alloy.

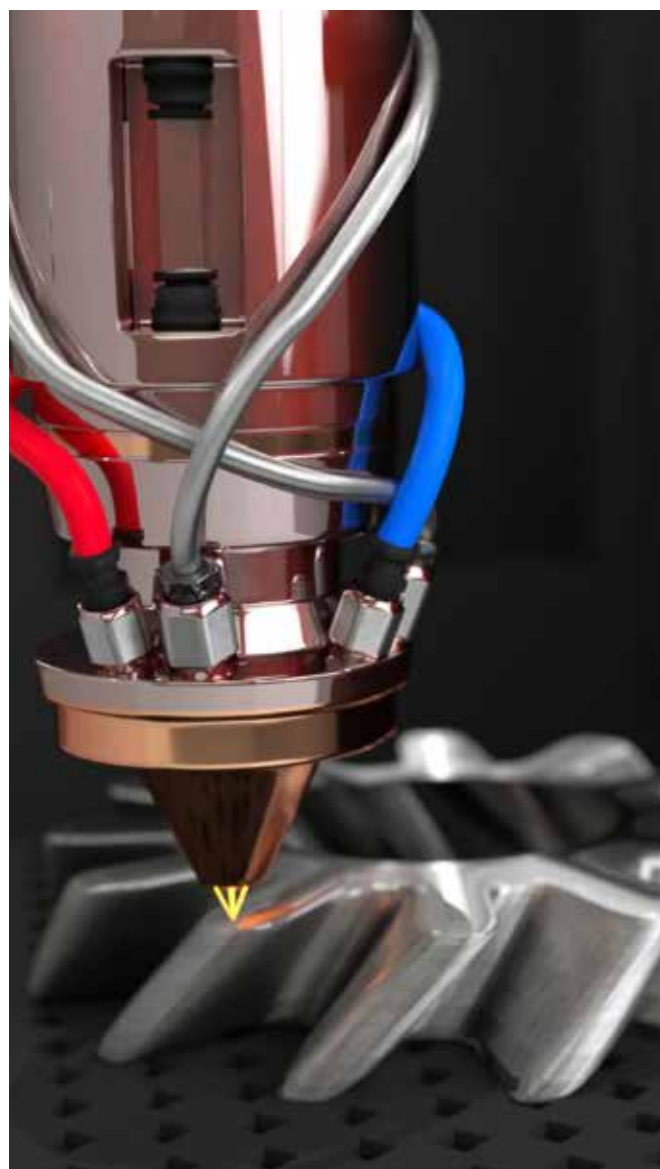
Using SanCut[®] containing a specific additive, that works as a combustion catalyst and improves combustion efficiency, it is possible to increase the temperature of the flame and to reduce, by up to 6%, processing time and comburent gas consumption. Thus, customers who choose Sancut[®] can mitigate their environment impacts by reducing emissions and energy consumption.

Another example of more efficient production processes is the **EasyCleaner**[®], a welding torch cleaning method designed and manufactured by Nippon Gases Italia that allows increased productivity and an improved working environment at customer sites.

A recent initiative in **additive manufacturing** involves the development of a technique to prevent oxygen and moisture from impairing the additive process in metal 3D printing, guaranteeing the appropriate mechanical and quality characteristics.

To provide the best possible assistance, Nippon Gases provides both the gases needed in the process and the technology to assist the customer's operations on site.

In the field of food and beverages, Nippon Gases Italia collaborates with a wide range of customers to enhance their production efficiency and productivity, while at the same time improving quality and food safety.



The Nippon Gases Italia Group develops innovative applications and technologies, while improving its systems continuously to make all production processes more efficient. Specialised support and scientific consultancy, combined with the experience acquired in the main realities of the sector, enable Nippon Gases Italia to offer efficient, easy to apply and self-sufficient turn-key solutions to all food companies.

Nippon Gases Italia has initiated various partnerships with private research foundations and compostable film production companies, combining the advantages of Modified or Protective Atmosphere Packaging (MAP) technology with the sustainability of compostable packaging to ensure that the product has a long shelf-life while maintaining its organoleptic qualities. In addition, Nippon Gases and the University of Salerno have recently collaborated to carry out studies to evaluate innovative gas mixtures to be proposed on the MAP packaging fish market, with the aim of increasing the shelf life of the product, which currently varies from 6 to 10 days, as much as possible.

Different gases and mixtures are used as a function of the effects to be obtained: to prevent oxidation and bacterial growth, oxygen inside the packaging is removed and the air is replaced with nitrogen or mixtures of nitrogen and carbon dioxide. When packaging fresh meat, instead, it is necessary to retain a high percentage of oxygen, whose effect on a pigment referred to 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. The mixtures are mainly composed of Nitrogen, Argon, Carbon Dioxide and Oxygen, in various proportions, depending on type of food to be preserved. This is a sustainable technique that helps combat the problem of food waste.

Relying on its extensive experience in modified atmosphere packaging, Nippon Gases Italia has fine-tuned the **FOODSENSE®** gas line, which can satisfy the most demanding food packaging requirements.



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

- proposing specific gases or 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.



Another example of sustainable technology is water carbonation, offered by Nippon Gases Italia 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 CO₂. 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, as well as a reduction in the number of plastic bottles used, thereby saving the energy that otherwise would be required for their disposal or recycling. The Group also manages the supply of gas for the so-called “fontanelle” (water fountains): the municipal water supply stations for the central Italy area (in particular Rome, Florence, Perugia and Terni), which in addition to guaranteeing access to an essential good, help limit the use of bottle packaging by consumers.

Furthermore, in order to satisfy the growing needs and evolving production processes of its customers, Nippon Gases Italia offers a cylinder conversion service, which includes, for customers that have reached important consumption volumes, the possibility of converting the supply of compressed gas to that of liquefied gas, through the installation of a cryogenic container placed at the customer site on a permanent basis. 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.

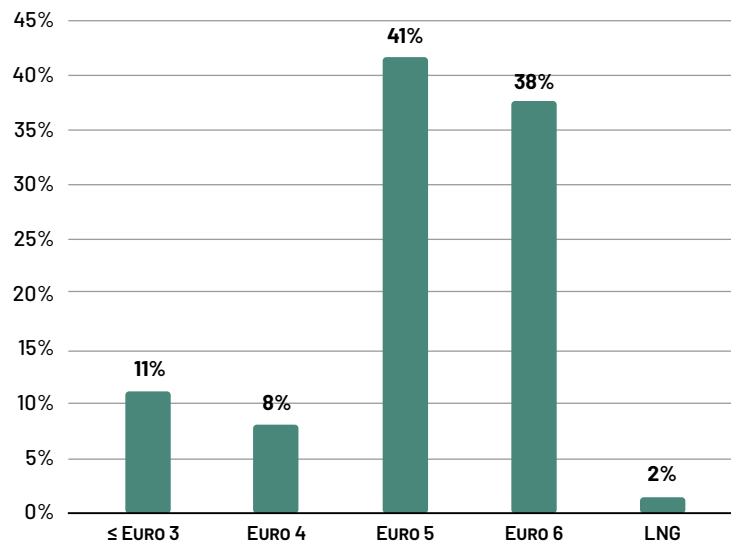
The **Package Distribution Department** organizes and manages the distribution and transport service for all the compressed gases (technical gases, pure and specialty gases, food gases, medical gases, and refrigerant gases). The Package Distribution Department collects customer orders and collaborates with the production departments to ensure a timely service and an effective use of the container stock by optimizing the distribution process. About this, the indicator monitored by the Package Distribution Department is km/cyl that indicates how many equivalent cylinders are transported for each kilometre travelled. The lower the value of the indicator, the more efficient the transport is, because a larger quantity of product is distributed with the same kilometres travelled. In FYE2022, +4.1% km were travelled and the km/bb indicator on the quantity of containers transported decreased by 4% compared to last fiscal year. These optimisations are due to the use of 300 bar bundles to partially replace 200 bar bundles in order for certain types of gas, which has led to a 30% increase

in the volume of product contained. In addition, as part of the reorganisation of distribution hubs, in order to reduce KPIs and make deliveries to customers more efficient, new filling centres for carbon dioxide cylinders for food use were opened, including an external agency in Latisana (UD) and the opening of a centre in Marsala (TP) is in progress.

In FYE2022, Nippon Gases took action to reduce the impact generated by the transport of products by modernising its fleet, replacing vehicles with a high impact on the environment. The fleet consists of 80% of vehicles with an environmental class ranging from euro 5 to euro 6.



ENVIRONMENTAL CLASS OF COMPRESSED GAS DISTRIBUTION VEHICLES



A further initiative to reduce kilometres travelled for the **Distribution Package** is the introduction of the new depot in Priolo, Sicily, which will also cover the southern part of the island. In fact, the entire Sicilian region was serviced by the only distribution hub, located in Messina, thus resulting in long distances for the transport of the containers.

With the inauguration of the new centre and the obtaining of the food distribution licence, which is expected in 2022, we will be able to supply customers in the southern areas of Sicilia while at the same time bringing benefits to the environment.

Cylinders are one of the company's most important assets and in order to implement an efficient use of them, the rotation rate of the containers is monitored and a cautious distribution of them at the production and distribution centres is planned, ensuring continuity of supply to all our customers.

The distribution logistics of some products, such as liquid helium, were reorganised by using small mobile tanks to fill the 'Dewar' containers at the customer's site, thus optimising transport and transfer operations.

Another recent introduction concerns the use of the WeTruck platform for planning the delivery of containers to customers. This new system, in addition to optimising distribution activities, will also lead to the digitalisation of paperwork, with documentation being sent by email to the customer and the relevant distribution centre, making the entire process more efficient and digital.

Cylinder inspection and testing

The inspection and testing of cylinders is one of the most important steps to extend the life cycle of containers. This is why Nippon Gases has invested in the automation of testing processes by introducing the 'We Smart Cyl' project with the aim of minimising errors and optimising processing times.



2.7 Installation and technical service activities at customer sites

Our Customer Service function works in the industrial and medical sectors and provides an in-depth technical support service to Nippon Gases Italia customers over the entire national territory. The objectives of Customer Service are the design and installation of gas storage and distribution systems at customer sites, enhancing the efficiency of the systems installed and performing preventive maintenance works, always ensuring the health and safety of the employees (of Nippon Gases Italia, its suppliers and its customers), respect for the environment and customer satisfaction.

The number of interventions carried out directly by the Nippon Gases Italia Group and by qualified technical assistance companies during FYE2022 increased overall by 4.6% and only thanks to initiatives to optimise the planning of interventions carried out at customer sites, this did not lead to an increase in the kilometres travelled by technicians involved in this work.

The kilometres travelled for technical assistance services remained at the same level as the previous fiscal year. Specifically, there was a significant improvement in the work carried out at industrial customers.

One of the main activities carried out, is the revamping of the tanks based on circular principles. This involves refurbishing equipment that over time would become obsolete; in this way it can be used and become perfectly functioning.

This activity, carried out internally by Nippon Gases Italia, aims to offer customers maximum flexibility as well as to extend the useful life of the equipment. Nippon Gases' goal is to service at least one third of the equipment annually, in order to extend the average life of the tanks and make maintenance personnel displacements more efficient.

In the medical field, the Group supports customers, mostly hospitals, for the maintenance of endocavitary suction pumps, which require oil lubrication. Thanks to its enrolment in the register of hazardous waste transporters, the Group is also independently active in oil recovery and disposal.



Customer Service manages all interventions through a computer system, which collects data relating to individual interventions. All data collected is analysed in order to optimize the services offered, reducing the number of interventions and the kilometres travelled. Moreover, the Customer Service monitors incidents and near miss events, to always guarantee the best security standards to its employees, suppliers and customers.

Another monitored parameter is customer satisfaction, through the number of complaints received that Nippon Gases Italia is daily committed to reducing them.

Staying in the IT sphere, the Group launched a project during FYE2022 to digitise the site register, for the time being limited to a few pilot operations. The project aims to digitise the documentation, still managed in paper form, which tracks all operations carried out on medical gas production facilities.

Operations will be carried out with tablets associated directly with a database. In addition, the efficiency enhancement project called "Magazzini viaggianti" ("travelling warehouses") was launched, which envisages the transformation of vans, used by technicians carrying out maintenance activities at customers' premises in Italy, into real fiscal warehouses.

The vans, which are equipped with shelves and drawers containing materials and spare parts inside, have been barcoded to allow the automated reordering of missing parts when the warehouse is in short supply, thus resulting in considerable savings in packaging and kilometres to replenish the fleet.

2.8 Solutions offered for Healthcare

In the medical sector, the Nippon Gases Italia Group operates through Nippon Gases Pharma S.r.l. and offers its customers a wide range of services, instruments and technologies for an innovative management of various conditions.

In terms of applications, the Group proposes advanced respiratory systems, including:

- **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®** system, the solution developed by Nippon Gases Italia for the treatment of respiratory insufficiency;
- **Ninoxan®**, a gaseous mixture of oxygen and nitrous oxide that, through its property, can induce very quickly a state of sedation-analgesia in a patient. It is particularly suitable for the treatment of from mild to severe pain of short duration.



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 contagion, and provides information on patient's health conditions in real time, enabling the physician to intervene immediately as needed.

HOME MEDICINE FOR HEALTH CARE IN MOLISE

During the reporting year, Home Medicine, the subsidiary specialising in Home Care and Telemedicine, won a major tender for the provision of services throughout the Molise region.

In addition to classic home care activities (nursing, physiotherapy and personal care services), the tender also includes the direct provision of diagnostic and telemedicine health services. In fact, it is Home Medicine doctors who remotely monitor the reporting of diagnostic activity, which is performed at home throughout the region by 80 specialised nurses equipped with highly innovative device kits. Tests such as ECGs (electrocardiograms), spirometry, pulse oximetry and continuous monitoring of vital parameters are carried out directly at the patient's home, all integrated in a single IT platform, made available to Home Medicine physicians as well as to hospital specialists who follow patients.

This system allows for better care of chronic and frail patients and aims to reduce the exacerbation of their illnesses, preventing their suffering and hospitalisation.

The entire activity is coordinated from 3 operational centres managed by Home Medicine, the organisational heart and the reference point for the 300 health workers involved in the execution of the more than 400,000 home visits per year covered by the tender.



In the field of assistance to hospitals, for several years Nippon Gases Pharma has proposed the **Site Gas Management - SGM**, project, a hospital management service through which Nippon Gases Pharma makes available a specialist who manages the supply of medical gases on behalf of the customer. This service results in process optimisation, cost savings and reduced environmental impact. The number of facilities on which the SGM system is implemented is steadily increasing compared to two years ago, the number of sites has grown by 10%.

For FYE2022, the Group improved the synthetic air production systems in use in healthcare facilities, making them more energy-efficient and, consequently, cost-effective, while still ensuring high quality. At the same time, microbiological air monitoring activities in health care environments were increased to monitor the concentration of pollutants or the presence of bacteria and viruses, which can occur in environments with low air exchange. Currently, the total number of control rooms in Italy is increased of 22% compared to previous fiscal year.

2.9 Solutions for refrigeration and air conditioning systems

The last few years have made the role of “cold” in everyday life clear: the *cold chain* has been crucial not only in ensuring the continuity of essential services (supermarkets, pharmacies and data centres, to name only a few), but also for the most crucial phase of the campaign against the pandemic, with the distribution of vaccines on a global scale, especially those that need to be stored at -80 °C.

Nippon Gases Italia Group operates through **Nippon Gases Refrigerants S.r.l.** in the field of refrigeration and air conditioning systems, to offer its customers a complete range of low GWP (Global Warming Potential) refrigerant gases, as well as cutting-edge products, services and technical solutions for commercial and industrial refrigeration, 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, over the years, has promoted the development of in-depth knowledge and professional skills. The Group is constantly searching for solutions to reduce the potential environmental impact of the supplied refrigerant gases.

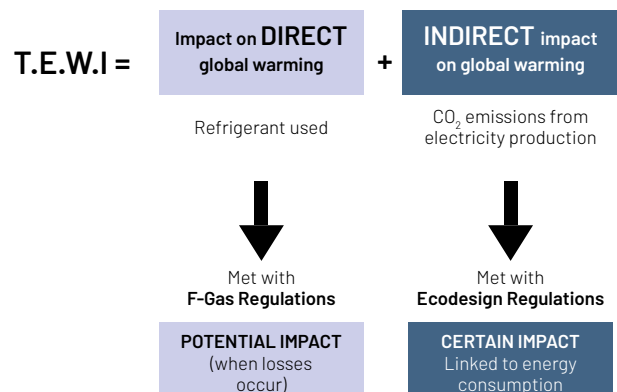
European regulations foresee an efficient transition to refrigerant gases that are less harmful to the environment. It is therefore necessary to invest not only in technological innovation and energy-saving logic (refrigeration consumes almost half of all electricity worldwide), but also in the consequent training and certification of technicians. In response to these regulations, the last few years have seen a steady introduction by the chemical industry of new candidate substances to replace refrigerants with a high environmental impact. Nippon Gases Refrigerants offers a complete range of solutions to improve the impact on the environment by reducing CO₂ emissions, and thanks to its cross-market presence, it works with national organisations, trade associations, designers, OEMs (Original Equipment Manufacturers), retailers and installers, and universities to provide the right support, the best products and the most appropriate solutions.



Energy efficiency for cost reduction

When choosing a facility, in addition to the **GWP** that measures the direct emission fraction and the resulting impact on global warming, the indirect CO₂ emissions must also be valued. The latter account for the largest share of the impact on the environment and reflect the operating costs related to electricity consumption over the lifetime of refrigeration systems.

The sum of the Direct and Indirect impact is the **T.E.W.I. (Total Equivalent Warming Impact)**.





A **partnership** with the **il Department of Energy of the Milan Polytechnic University** was established during this fiscal year to develop important experimental work aimed at evaluating the performance of a small water-to-water heat pump by identifying alternative fluids to R-134a, a refrigerant still widely used in many applications but which, due to its high GWP, will be progressively replaced in favour of refrigerants with lower environmental impact.

The alternative refrigerant gases used in the study provide a viable alternative for retrofitting with gases that have a lower environmental impact in refrigeration and air-conditioning applications.

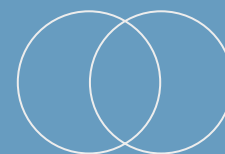
Nippon Gases Refrigerants offers new refrigerant gases, characterised by high stability during use in systems and a low permanence in the atmosphere, limiting their environmental impact to a minimum. By selling new generation refrigerant gases with low GWP (Global Warming Potential), in lieu of HFC refrigerants (old generation hydrofluorocarbon refrigerant gases) having a very high GWP, Nippon Gases Refrigerants was able, from 2016 to FYE2022, to achieve a reduction in emissions from its customer using this new technology of over 344,500 tons of CO₂ eq.

Refrigerant gases are a special hazardous waste, so they must be recovered in accordance with regulations and disposed of or regenerated by specialized companies. This is the reason why 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. Nippon Gases Refrigerants has been able to exploit the great advantages associated with the use of digital technologies, promoting intense training and information activities targeting both customers and direct and indirect sales forces.

In addition, energy analyses were conducted for the development of consumption efficiency solutions for active plants. These actions were accompanied by the promotion of low-GWP synthetic gases produced by two multinationals and included in retrofit systems or latest generation machines and that of natural gases, such as CO₂ and propane, used in commercial refrigeration to replace HFCs.

Finally, Nippon Gases Refrigerants has developed a partnership with Angelantoni Test Technologies S.r.l., one of the world's leading manufacturers of simulated environmental test chambers, to exclusively produce and distribute its new environmentally friendly refrigerant gases **R-472A** and **R-472B**. These new refrigerant blends have an extremely low global warming potential (below 600 GWP) and have been developed to minimise emissions of fluorinated greenhouse gases, in accordance with the objectives of the EU F-Gas Regulation.





3. Innovative

At **Nippon Gases** we believe that innovative, responsible and sustainable business plays an important role in building a healthy, thriving society. We leverage our knowledge of science and business acumen to provide lasting solutions in the industrial gases industry. For us, a harmonious relationship between people, society and the planet is the way we want to work today and every day.

Therefore, we encourage collaborative innovation to make life better through our technological solutions and gases. Digitalisation and R&D allow us to improve our services and our customer experience as well as boosting the transition to a carbon neutral industry.

Nippon Gases' commitment to our customers, suppliers, employees and associates, and to the communities in which we operate, reflects our dedication to the environment and to sustainability.

3. Innovative

3.1 We innovate to do our best for our customers

For Nippon Gases Italia, innovation is the main driver for pursuing business objectives related to customer satisfaction and environmental goals. The Group is constantly striving to reduce the impact of its operations on the planet. Thanks to a strong results-oriented approach, combined with continued customer focus, Nippon Gases Italia has developed processes and technologies that meet the demands of an increasingly demanding market in the area of sustainability and continuous evolution.

The Marketing and Development Department in particular aims to create technologies for the industrial and health fields that allow turn needs into opportunities for growth and improvement. This is possible through a strategic collaboration with suppliers, as well as synergy and common goals shared with customers. Of essential importance, in this context, is a constant exchange of know-how both with Nippon Gases Europe and with the Japanese parent company. The technology and skills transfer geared to continuous improvement leads to the development of the most advanced solutions, enabling more and more customers to grow in terms of quality, productivity, economic and environmental.

All processes at Nippon Gases Italia are integrated in terms of quality, health, safety and protection of the environment. The company undertakes to guarantee to its customers top quality products and services, implementing management systems in keeping with the main international standards. Nippon Gases Italia invests in its people so that they may be fully aware of the quality level to be guaranteed to its customers through dedicated training and awareness raising activities.

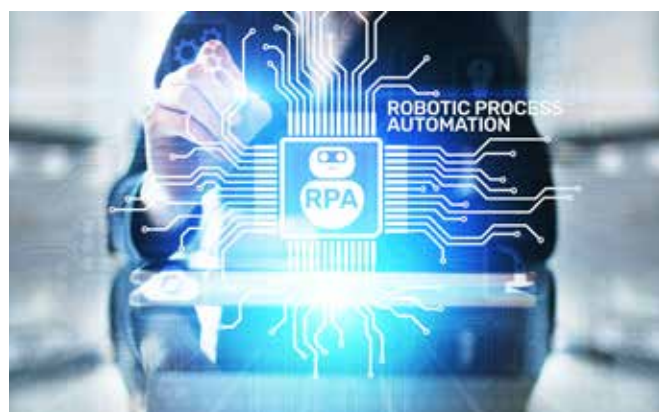
The company applies rigorously the group's quality and food safety policy and defines and disseminates the relative goals and implementation programmes.

Continuous process improvement is a key element of a company's organisational structure, in that it is essential to achieve a competitive edge in the market, and it is one of the main levers an organisation can rely on, especially at a time of crisis.

In Nippon Gases Italia, the Productivity function has as its objective the continuous improvement of business processes, operational and organizational, and the definition of strategies aimed at the pursuit of competitive advantage for the company also in the field 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 crisis.

In the course of FYE2022 Nippon Gases Italia implemented many projects, most of them designed to define a better strategic management of its productive processes.

For FYE2022, a European project was developed to introduce a new "Share Point" database for the management of improvement projects coordinated by the Productivity Function. This application shows all of the initiatives, their economic value and the results achieved in terms of energy savings, water consumption and carbon dioxide emissions.



In keeping with the changes introduced in the previous year, in which the RPA Robotic Process Automation - Accounts Payable was developed, making it possible to automate the company's accounts payable cycle and introducing the automation of a large part of the accounts payable document cycle, various analyses were carried out, with the intention of extending this trial to all business processes where automation is applicable, such as the back office.

With regard to customer service, the focus during the year was on innovating the after-sales service, in order to guarantee customers qualified, innovative and efficient technical assistance. In this context, state-of-the-art technologies have played a key role: the Remote Technical Assistance service (ATR 2.0) is based on artificial intelligence and augmented reality, which allow problems on installations to be identified effectively, quickly and innovatively and provide customers with clear and precise instructions on how to resolve them. Thanks to this new service, customers can manage directly from their devices, in total safety and speed, guided maintenance operations on the plant with the support of the remote Nippon Gases technician.

A further innovative tool introduced in FYE2022 for hospital customers is the "Site Register" in digital format, of which the first pilot projects have already been carried out during the year. The site logbook is a file in which Nippon Gases technicians record the work carried out on medical gas plants. Thanks to this project, it is possible to save paper and storage space and enter data into an electronic database directly via the tablet of the technical staff. Again, in the area of the digitalisation of processes, For Nippon Gases Italia, digitalisation is a wide-ranging project that involves the work of all employees: for this reason, internal training courses were organised during the year by the IT Team aimed at making Nippon Gases Italia an increasingly "data-driven company", disseminating specifically the knowledge and skills of Tableau, the business intelligence software that enables to organise and make the most of company data.

SALES HUB

In FYE2022, the introduction of a group of in-house salespeople working on specific projects in the digital sales area has made it possible to increase sales volumes by reducing the average number of site visits for these activities and the related reduction in kilometres travelled and thus the environmental impact.

These are the first steps taken by Nippon Gases Italia to move some activities from a traditional sales model to a more innovative one. The Sales Hub function supported by Digital Communication has implemented a new pull strategy aimed at generating potential customers using multiple digital tools such as social media, websites, blogs and countless other tools, enabling the effective management of pull marketing campaigns. The task of the Sales Hub Function is to attract and create interest in the users by finalising the conversion from potential to actual by optimizing the lead generation.

SOCIAL SELLING

Nippon Gases Italia has implemented a new business model based on strategies of Social Selling, which involve a process of customer acquisition lead by information obtained from social media.

These latter are a strategic and now essential tool for developing and growing relationships as an intrinsic part of the business process.

Through Social Selling, it is possible to use social media to identify people and companies looking for products and services and turn them into customers. By using these channels, Nippon Gases personnel can directly interact with potential customers, answering their questions and publishing contents that they may find helpful.

Approaching techniques are inbound and are aimed at attracting the prospect customer, not interrupting or interfering with his ongoing activities.



PONTINIA PLANT AND NEW CERTIFICATIONS

Built in 1997, the air separation unit in Pontinia (LT) was designed and constructed for the fractional distillation of air and the production of Oxygen, Nitrogen and Argon and is located in a property extending over 15,000 square metres, with plenty of space available for future expansion. Following major revamping to guarantee high standards of efficiency, safety and production continuity, the unit started the production on August 2021.

In addition, during the fiscal year, the Pontinia production plant obtained ISO 9001:2015 and ISO 13485:2016 certifications relating to quality management systems for the primary production of oxygen, nitrogen and argon for industrial use and for the production of nitrogen medical device for cryopreservation, respectively.

These certifications demonstrate that the quality management systems underlying the production and sale of gases produced at the site achieve the required standards and provide customers with safe and reliable technical products and medical devices. These certifications are in addition to ISO 45001:2018 for the primary production of oxygen, nitrogen and argon already obtained in November 2021. Once the ISO 9001 and ISO 13485 certifications are finalised, the work is not finished. In fact, the Pontinia site will have to prove that it continues to comply with the schemes for which it has been certified and to operate in perfect safety while maintaining high quality standards. The next steps will be to obtain authorisation for the production of food gases, ISO 22001 and FSSC 22000 certification, international standards to regulate the food safety and hygiene management system, and finally to obtain authorisation for the production and distribution of medical gases.

Antonio D’Ettorre

Bulk and On Site Operations Director

Nippon Gases Italia



How is it possible to be more sustainable through operations?

The responsible management of environmental issues is a strategic factor for Nippon Gases Italia, and in general for the entire Nippon Gases Group.

The company’s concern for the environment is reflected in its activities and investments in advanced technologies with a low environmental impact and in increasingly effective production processes that guarantee a more efficient and responsible use of energy and natural resources. Improved processes make the entire value chain more and more sustainable. As far as operations specifically are concerned, it is inevitable that the optimisation of operations has a major positive environmental impact. Indeed, production and supply chain efficiencies lead to benefits that should not be underestimated to the extent that they allow resources not to be wasted.

Can you give some examples?

Over the years, the entire Nippon Gases Group of which we are a part has identified multiple solutions aimed at helping customers progressively reduce GHG emissions in their operations and we constantly work to reduce emissions in our activities.

The world is currently going through a period of great instability and societies face enormous challenges in a very complicated inflationary environment, and with uncertain economic growth in light of the Ukraine/Russia conflict. Besides the shortage of raw materials and the resulting disruption of the global supply chain, we are witnessing an unprecedented increase in energy costs.

Despite this very complex situation of rising energy costs, we have increased the number of plants powered by renewable energy sources with the aim of reducing emissions of CO₂ throughout the value chain, increasing the percentage of renewable energy to 64% from 38% just a year ago. As of today, we can proudly say that all of our air separation units, i.e., the plants from which our cryogenic liquids, argon, nitrogen and oxygen, are produced and distributed to customers, are powered by renewable sources.

Furthermore, aware that the fight against climate change is an urgent global problem and therefore also a priority in our activities, we have invested in new production facilities. In the fiscal year that has just ended, we inaugurated the renewed Green B.A.G. (Bulk Atmospheric Gases) Farm in Pontinia, i.e., a plant with state-of-the-art equipment to guarantee the quality of the gases generated, producing Oxygen, Nitrogen and Argon.

This important investment is part of a series of operations that our group intends to carry out in Italy, in order to increase its competitiveness and proximity to customers, with a focus on certain sectors that are key to the sustainable growth of the industrial sector. With this in mind, we have also laid the foundations for the construction of another Green BAG Farm in Caserta. Finally, we have invested in our own plant, located in the south of Italy and in which we hold a non-majority share, to double production capacity.

In terms of logistics, what sustainable practices does Nippon Gases Italia adopt?

Nippon Gases Italia’s commitment to limiting and reducing the environmental impacts generated by its operations also concerns the optimisation of logistics flows, which allows us to reduce CO₂ emissions in this process as well.

Efficiency in distribution activities comes through digitization, especially the use of digital technologies has become unavoidable. Our entire distribution process is in fact currently being improved and thanks to the introduction of new software for managing the distribution of products in tanks (LIN, LCO₂, LAR and LOX), we are already seeing the first returns in terms of efficiency and a consequent reduction in our carbon footprint. The objective of the programme, which involves the use of software, is to optimise the quantities of products delivered, reducing kilometres travelled and thereby reducing fuel consumption.

It may sound like an easy exercise, but we have to balance our needs for optimal logistics with the needs of our customers. Finally, Nippon Gases Italia equipped its entire vehicle fleet with frontal cameras installed in the driver’s cab and facing the road.

These, in addition to the On Board Computer (OBC) system installed on the vehicles, allow the monitoring, control and validation of the driving performance of the drivers with the aim of increasing the safety level of driving activities and achieving the company’s goal of zero accidents, and zero injuries. The acquired driving data are processed and analysed in order to identify the best methods for improving performance.

3.2 Nippon Gases Italia's approach to environmental sustainability

Nippon Gases Italia is committed daily to sustainable development, first and foremost within its own plants and processes, through constant investment in research and development to achieve increasingly ambitious goals in terms of energy consumption and optimisation of resource use.

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 diligently follows the Environmental Guiding Principles defined by Nippon Gases Europe:

- **Ensure that the Group's companies** follow ethical paths to benefit the company, the economy, and the environment;
- **Design and develop** products that can be manufactured, transported, used, and disposed of or recycled safely;
- **Work with customers**, drivers, suppliers, distributors, and contractors to promote the safe, reliable use, transport, and disposal of chemical substances, as well as share information about the risks and dangers related to its products and services;
- **Design and manage** facilities safely, reliably, and with respect for the environment;
- **Promote the prevention of pollution**, waste reduction, and the conservation of energy and other critical resources in every phase of its products' life cycle;
- **Cooperate with government and organizations** in the development of effective, efficient laws, rules, and standards in the areas of safety, health, and environment;
- **Support research and education** about workers' health and safety, environmental impact, and the safety of products and processes;
- **Strive toward the goal** of avoiding accidents, injuries, and damages to human health and to the environment caused by products and operations, and openly report our performance in the area of health, safety, and environment.

RESPONSIBLE CARE



Nippon Gases Italia, as a member of Federchimica, adheres to the voluntary Responsible Care program, which is promoted by the Sustainable Development of the Global Chemical Industry, according to values and behaviours targeting safety, health, and the environment.

Following the Programme, Nippon Gases Italia strives for constant improvement of its products, processes and conduct in the areas of health, safety, environment, management of products along their life cycle and Corporate Social Responsibility



WE ENABLE A CARBON NEUTRAL WORLD

It is called Carbon Neutral World and is the new initiative shared by all the companies that are part of Nippon Sanso Holdings Corporation (NSHD) to reduce their carbon footprint.

“Making a carbon-neutral world possible” represents NSHD’s commitment to contributing to a sustainable society for the future.

Since its foundation, NSHD has remained at the forefront of research and development in gas engineering technologies and equipment, always offering the best solution to its customers.

All of the Group’s customers are also actively working on the transition to zero emissions; by using Nippon Gases’ technologies, this transformation process can become a reality.

Our vision is to create social value through technological applications of our gases, that increase industrial productivity, improve welfare and contribute to a more sustainable future. In line with its vision, Nippon Sanso Holdings, with its entire team of “Gas Professionals”, is already taking the first steps to redefine and enhance its portfolio of Carbon Neutrality oriented solutions in the following 5 areas of interest that guides its vision.

- **Green combustion:** Nippon Sanso Holdings offers the perfect combination of green oxygen with state-of-the-art oxyfuel technology, enabling industries to reduce fossil fuel consumption and greenhouse gas emissions, while also making CO₂ capture easier and cheaper.
- **Hydrogen-based projects:** Nippon Sanso Holdings provides access to the most suitable solutions for producing green hydrogen with low emissions of carbon, ensuring the right balance between the most relevant technology, available raw materials and renewable energy.

- **CO₂ capture:** by using the most appropriate technology for CO₂ capture, Nippon Sanso Holdings enables its customers to reuse CO₂ in various production processes or in other sectors of industry after purification.
- **Circular economy:** recovered CO₂, scrap metal, waste heat, sludge produced in waste water treatment plants and industrial, agricultural and municipal waste can be used in combination with the right technology to replace or reshape current production processes into more sustainable ones.
- **Digitalisation:** Nippon Sanso Holdings’ wide range of gases, equipment and services for the electronics industry promotes digitalisation as a driver for a circular business model, contributing to a reliable electronics industry for a zero-emission future.

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 Nippon Sanso Holdings 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.



We enable
a carbon neutral
world

A NIPPON SANSO HOLDINGS INITIATIVE



3.3 Management of environmental issues

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 international standards, and continuous monitoring of environmental impacts with the aim of controlling and reducing them. To this end, Nippon Gases Italia is equipped with a management system for health, safety, and the environment that is certified according to the main international standards.



Company	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 for the Anagni, Bagnatica, Chivasso, Modugno, Novara, Ravenna sites, and for the Distribution and Customer Service Departments

** 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:

- **Design of products and solutions** that drastically reduce harmful emissions (for example, new generation refrigerant gases) or the use of resources;
- **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;
- **Certification** of a number of production sites in the EMAS register;
- **Offering** 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;

- **Optimising** transport as much as possible through a gradual introduction of more modern and more efficient vehicles, to replace older, highly polluting vehicles and through the introduction of innovative software for delivery planning and optimisation.

Although the intrinsic nature of the business does not involve particular environmental risks, Nippon Gases Italia's attention to environmental issues is further reflected in its full compliance with current environmental laws and regulations.

Nippon Gases Italia's main environmental impacts are related to the consumption of electricity at its plants, and related greenhouse gas (GHG) emissions.

Operatively, the company endeavours to make efficient use of resources and monitor consumption levels continuously.

The **Productivity** Department, which is involved in all branches of the business, strives to optimize processes for economic and environmental impact benefits.

About this topic, the main projects implemented in FYE2022 were:

- the “Argon recovery” project implemented during tanker loading at Verres;
- the reduction of harmful emissions into the atmosphere at Chivasso, especially related to the pure methane production plant;
- the “DevH2forEAF” project aimed at the use of hydrogen in steel production, in partnership with other major industrial entities;
- improvements to the testing facilities carried out during the fiscal year, that partly involved improvements aimed at eliminating residual moisture present inside of the containers for the purpose of the hydraulic test to which they are subjected during the re-testing (periodic testing). For the Chivasso site, it was a matter of a different setting for the cylinder drying system, while for the Terni site, efficiency was ensured by the new testing plant that came into service in 2022.

These measures ensure the improved condition of the container on subsequent refilling and a substantial simplification of the reclamation process required for the finished product to meet internal quality specifications.

For the supply of electricity, the purchase of guarantees of origin (GOs) certifying the origin from renewable sources of the energy purchased and consumed by Nippon Gases Italia for the Ravenna, Verres and Pontinia sites was also confirmed for FYE2022. The share of energy certified with GO amounts to 64% of the total electricity consumed, an increase of 83% compared to the previous year when the purchase only covered the energy consumed in the period from September 2021 to March 2022.

DevH2forEAF

As part of its contribution to the decarbonisation of production processes, Nippon Gases Italia is part of the **DevH2forEAF project** (Developing and enabling H₂ burner utilisation to produce liquid steel in Electric Arc Furnace), one of the 25 research projects in the coal and steel sectors selected and financed by the European Commission to support the Green Deal.

The DevH2forEAF project was selected from 142 proposals within the Research Fund for Coal and Steel (RFCS), an EU funding programme that supports research projects in the coal and steel sectors. In line with the objectives of the European Green Deal, the RFCS aims to reduce carbon dioxide emissions in steel production processes.

The **Electric Arc Furnace** (EAF) is a type of furnace used for steel production. In modern EAFs, the contribution of chemical energy for scrap smelting and refining ranges from 25% to 45% of the total energy required.

Burners using natural gas, methane or other fossil fuels provide between 40 and 80 kWh/tons of energy, which means that to produce 100 tons of steel requires the combustion of 370-750 Nm³ of natural gas with the emission of 0.75-1.5 tons of CO₂. Replacing only 10 per cent of natural gas with hydrogen in the entire European steel production would result in a significant reduction of CO₂ emissions by up to 0.1 million tons per year.

The main aim of the DevH2forEAF project is to develop and make a hydrogen-fuelled burner usable as a substitute for natural gas in steel production via EAF.

The results of this work will represent a milestone for the use of hydrogen in steelmaking, and the first step towards the decarbonisation of the steel industry.

The project, involving a consortium of seven players from the industrial and steel world, is led by RINA Consulting and it was launched in July 2021 and is due to run until December 2024.



3.3.1 Energy consumption

Nippon Gases Italia's energy consumption largely refers to the electricity consumption of its plants and offices, and the use of fossil fuels for vehicles and plants.

ENERGY CONSUMPTION BY SOURCE (GJ)

	FYE2020	FYE2021	FYE2022 ¹
Methane	475,001.3	503,555.9	503,408.0
Diesel	17,906.6	15,117.5	14,691.7
Fuel Gas	7,878.8	11,402.4	12,318.6
OffGas Shu	5,182.6	5,634.3	6,327.8
Direct consumption of energy from non renewable sources	505,969.3	535,710.1	536,746.1
Consumption of purchased electric energy	839,926.2	846,486.0	912,122.7
Of which from renewable sources	-	318,875.4	583,758.1
Vapour	16,144.2	13,600.4	5,813.7
Indirect energy consumption	856,070.4	860,086.4	917,936.4
Total energy consumption	1,362,039.7	1,395,796.5	1,454,682.5

Compared to the previous year, energy consumption increased slightly (4.2%), grown of direct (+6.7%) and indirect (+0.2%) energy consumption.

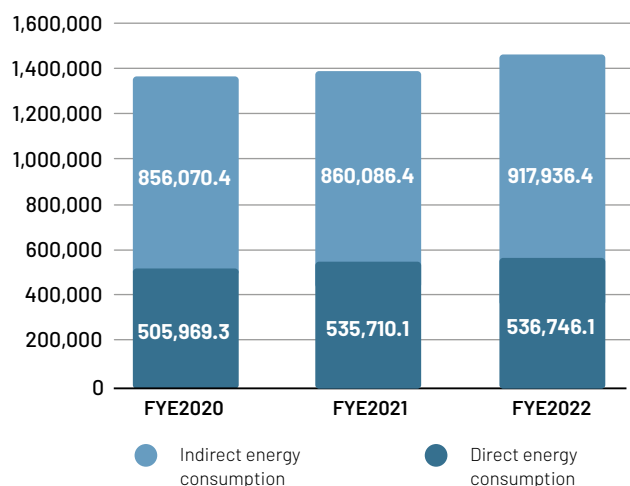
¹ As reported in the Methodological Note, FYE2022 data also include the Dryce S.r.l. plants.

This increase was largely generated by the commissioning of the Pontinia plant, as well as, to a lesser extent by the inclusion of Dryce in the reporting boundary.

Direct energy consumption, which accounts for 36.9% total energy consumption, is primarily due to methane consumption (93.8%), which did not change significantly compared to the previous year.

The remaining 6.2% of direct energy consumption is accounted for by diesel, fuel gas and OffGas Shu. Consumption of Fuel Gas and OffGas Shu fuels generated by the industrial processes of the Ravenna chemical hub and used instead of natural gas went up by 8% and 12.3% respectively compared to the previous fiscal year. Preference was given to the use of such fuels over methane because they were already available on site and had a more advantageous cost.

ENERGY CONSUMPTION (GJ)



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 follows:

- **Direct emissions** (or Scope 1): greenhouse gas emissions from sources owned or controlled by an organization, such as those resulting from fuel consumption or leaks of refrigerant gases into the atmosphere;
- **Energy indirect emissions** (or Scope 2): greenhouse gas emissions from the generation of electricity, heating, cooling and steam consumed by an organization but purchased from third parties and therefore not directly generated.

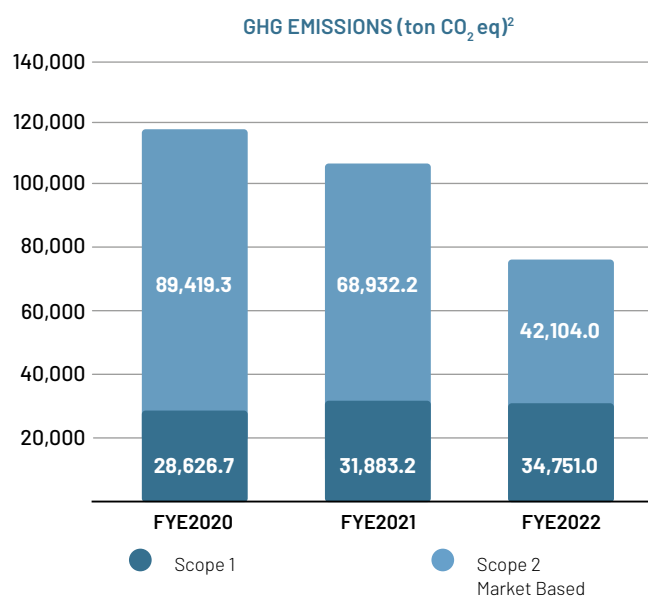
GHG EMISSIONS (ton CO₂eq)²

	FYE2020	FYE2021	FYE2022
<i>Methane</i> ³	26,578.2	28,176.0	28,297.6
<i>Diesel</i>	1,317.6	948.8	886.2
<i>Fuel Gas</i>	440.9	638.0	692.5
<i>OffGas Shu</i>	290.0	315.3	355.7
<i>F-gas</i>	-	1,805.1	4,519.0
Emissions Scope 1	28,626.7	31,883.2	34,751.0
<i>Vapour</i>	774.1	652.1	276.7
<i>Electricity</i>	88,645.2	68,280.1	41,827.3
Scope 2 emissions Market Based	89,419.3	68,932.2	42,104.0
Total emissions (Scope 1 and Scope 2)	118,046.0	100,815.4	76,855.0

The Group's overall emissions decreased sharply due to the decision to source an increasing share of electricity from certified renewable sources.

In line with what was recorded for energy consumption, Scope 1 emissions, accounting for 45.2% of total emissions, increased by 9% compared to FYE2021, largely due to losses related to refrigerant gas production operations carried out at the Alessandria site. Scope 2 emissions, on the other hand, which account for the remaining 54.8% of total emissions, decreased by about 38.9% compared to FYE2021 due to increased energy from renewable sources purchased despite the start-up of the Pontinia site.

In particular it should be noted that Scope 2 emissions have been calculated according to the Market Based method, that includes an emission factor that considers the residual mix, that is electricity produced exclusively by the domestic thermoelectric fleet, excluding renewable sources, but zeroing out emissions from certified green electricity. Considering instead the Location Based approach, which involves the use of emission factors relating to specific national power generation energy mixes, Nippon Gases Italia's Scope 2 emissions are 79,811 tons of CO₂eq. The 47.6% discrepancy relative to the emission figures determined according to the Market Based approach is due to the purchase of GOs attesting the origin of electric energy from renewable sources entailing a decrease in emissions.



Nippon Gases Italia makes a tangible commitment to limit its GHG emissions by developing numerous initiatives, also in partnership, where the Group operates on-site plants. One example of this is the project carried out with Cogne Acciai Speciali, one of the leading producers of long-lasting products in stainless steel and nickel alloys, to modernise its ASU plant in the Aosta steelworks, to which Nippon Gases Italia is a supplier of the oxygen, nitrogen and argon needed in the production process. This project, strongly supported by both parties, provides for the upgrading and optimisation of the plant, ensuring greater production efficiency, the decrease in energy consumption for gas production, estimated to be in the range of 15%, with a consequent reduction in environmental impact, while fully respecting the local community.

² It should be noted that, with reference to Scope 2 emissions, the table and graph, unlike last year, report emissions calculated using the Market Based approach.

³ It should be noted that for the conversion of methane consumption to GJ, for FYE2022, the conversion factor provided by DEFRA 2021 'Net CV' was considered, to disregard any losses. Consumption in previous years, on the other hand, was calculated by considering the DEFRA 'Gross CV' conversion factor of the respective years.

3.3.3 Waste and water management

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

In FYE2022 Nippon Gases Italia's production, activities generated a total of 569.1 tons of waste, marking an increase of 5.1% compared to the 541.3 tons produced in FYE2021 and an increase of 2.7% compared to the 554.0 tons generated in FYE2020. This was due to some extraordinary actions for the disposal of materials following specific maintenance on the Ravenna and Verres plants and for renovation activities to resume production at the Pontinia site and then for the acquisition of the air fractioning column located in Lazio.

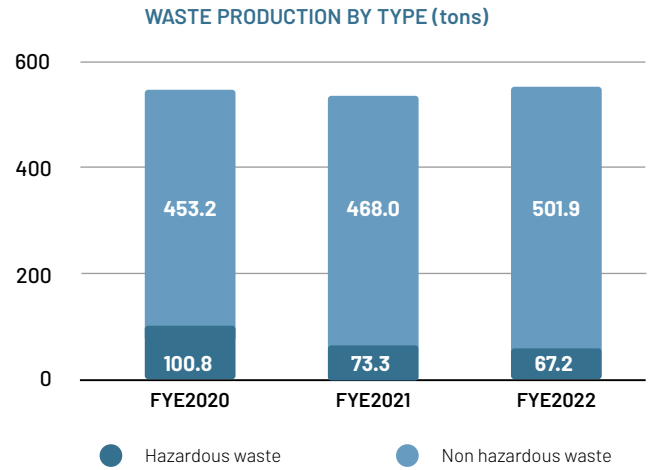
In FYE2022, 88.2% of this waste, (501.9 tons) was made up of non-hazardous waste, while the remaining 11.8% (67.2 tons) was hazardous waste.

This waste mainly came from maintenance processes. The gas containers (cylinders, mobile and storage tanks) are not "single use"; rather they are reused for decades until the end of their useful life.

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 Italia's activities.

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

Special waste is produced when decommissioning obsolete equipment, which can lead to larger quantities of ferrous metals, oils, oil-soaked rags, or extraordinary plant cleaning, which may produce unconventional waste with respect to the activities of the site itself.



There are two significant figures to keep in mind: the amount of hazardous waste produced by Customer Service at the customer premises during maintenance and the gas that is reprocessed where recoverable at the Bagnatica plant.

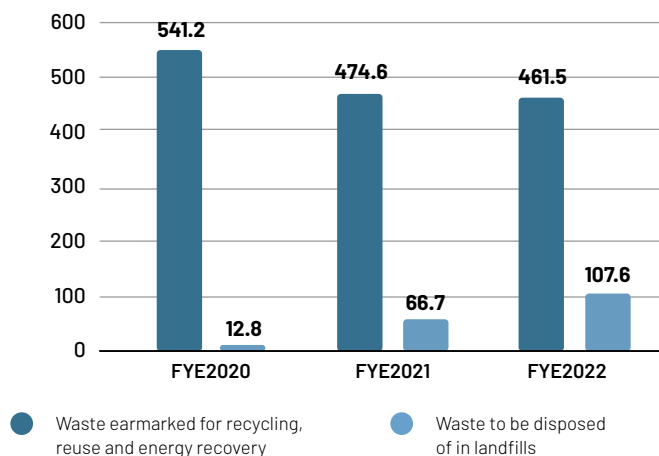
In the first case, the waste is loaded into the customer service register of the plant in the relevant area, whereby the data originating off-site is entered into the register of the nearest group production site, thus increasing the amount of waste produced.

In the second case, the purity of the incoming gas discriminates between the option to reprocess the gas or send it permanently to landfill, thus trying to limit quantities of hazardous waste to landfill by regenerating as much as possible.

In order to limit disposal in landfills, more attention is being paid at operational sites to entrusting the waste to authorised landfills that are willing to recover the waste, thus abandoning those landfills that can only dispose of the waste.

81.1% of the waste generated (equal to 461.5 tons) was sent for recycling, reuse or energy recovery, while 18.9% (equal to 107.6 tons) was sent to landfill: this share has increased over the years in parallel with the start-up of the Pontinia plant, in addition to the extraordinary disposal operations related to maintenance activities carried out in particular at four sites (Ravenna, Verres, San Salvo and Brugine) and the different treatment of waste by the operator in particular at another site. The production processes used at Nippon Gases Italia sites are entirely standardised and hence tend to generate the same types of waste, both in terms of EWC codes and in terms of amounts. In particular, some discrepancies over the years might be due to the fact that some landfills may no longer be able to accept the waste, so that the disposal modalities used for a given type of waste might be non-repeatable in the following years.

WASTE PRODUCED BY METHOD OF DISPOSAL (tons)



All the waste generated by the company is handed over to authorised intermediary or authorised disposal companies. The transport of waste materials is entrusted to authorised companies and only and exclusively in the case of waste produced during maintenance works on the systems installed at customer sites (hydraulic oils), the Customer Service of Nippon Gases Italia transports the waste using authorised company vehicles.

Waste management is on-site and depending on the geographical area, local disposers are used. All suppliers are qualified, and a contract is established with them following an administrative verification of authorisations, such as, ministerial authorisations (also by consulting the official archives on the MITE website) and the signing of a Purchase Order with the supplier.

Nippon Gases Italia constantly manages waste production and management: the sites that generate waste use a loading/unloading register. The relevant data are transmitted to the management every three months and validated by the individual sites upon receiving the fourth copy of the formulary. Every year, each site transmits waste related data to the local authorities by compiling the environmental declaration form (Modello Unico di Dichiarazione ambientale - MUD).

On the part of the production sites, the focus on possible waste reduction is always kept very high as well as the search for disposers that can guarantee waste recycling, decreasing the amount of waste destined for landfill and implementing a Circular Economy process.

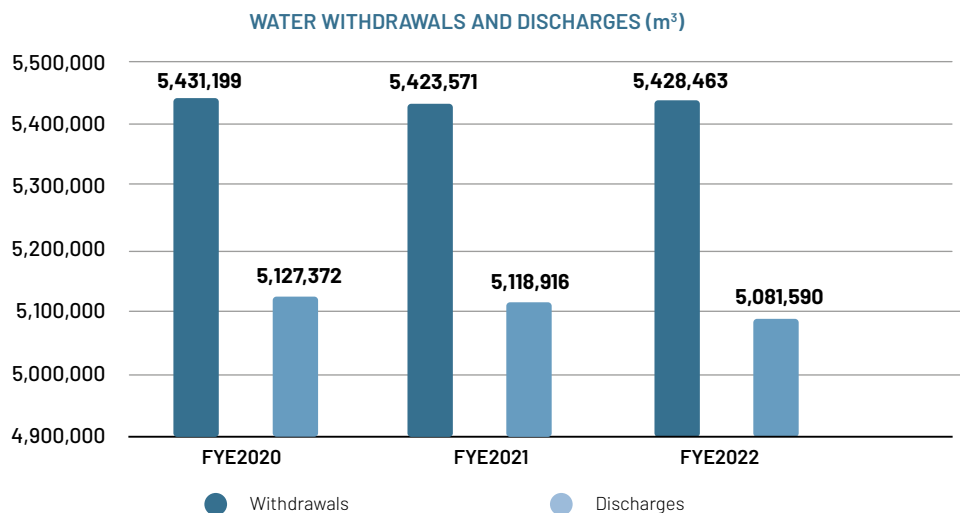
Separate collection of MSW (Municipal Solid Waste) waste has been established at most Nippon Gases Italia sites, and wax ink printers have been adopted to eliminate the use of toner and the production of hazardous waste. In all our offices furthermore it is also in use the print reduction program, which regulates the consumption of paper and uncontrolled printing. Programs aimed at reducing non-hazardous plastic waste from our activities are also in place at the European level.

In addition, a pilot project is underway to deal with hospital waste, which is currently stored in storage rooms and picked up by external companies that outsource its management to specialised disposal centres. Instead, the project provides technology that treats the waste directly in the hospital and turns it into traditional waste that can be disposed of like any other waste.



Finally, Nippon Gases Italia's focus on environmental impact also addresses water consumption.

Water procurement sources are numerous and diversified. Primary production plants (Bulk), which are sites using the greatest quantity of water in terms of volumes withdrawn and discharged, meet their requirements mostly from artesian wells and a consortium supplying water for industrial use.



Secondary production plants (Package) and offices mostly use water from municipal water systems. In terms of water discharge, almost half of the sites discharge to public sewers where they are tied to municipal aqueduct water withdrawal, while the remaining sites discharge either to water treatment tanks (such as the Ravenna and San Salvo sites) before final destination or to surface waters.

During FYE2022, Nippon Gases Italia withdrew almost 5.4 million cubic meters of water, substantially stable compared to FYE2021 (it should be noticed a slight increase of 0.1%). Of this, 91.7% came from wells, 6.5% from private suppliers, 0.9% was demineralized water, 0.6% from surface sources and the remaining 0.3% from municipal or state distributors.

The amount of water discharged, of about 5.1 million cubic metres, declined slightly compared to the previous fiscal year (-0.7%).

Of this quantity, the near totality consisted of discharges into surface waters (96.4%), 3.2% of discharges into third party sewer systems and 0.2% of discharges into municipal sewer systems. The remaining 0.2% was water vapour recovered from hydrogen production processes, which was supplied to, and used by, other stakeholders within the Ravenna petrochemical hub.

These results on water consumption and discharge are especially positive given the increase in volumes produced and the inclusion of an additional production site compared to the previous fiscal year.

In the activities of Nippon Gases Italia, water is both a utility (as cooling water) and a raw material (in hydrogen 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 analyse their waters 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 that is provided to the petrochemical cluster.

All production sites have permits for their water discharges either Single Environmental Authorisation (Autorizzazione Unica Ambientale – AUA) or Integrated Environmental Authorisation (Autorizzazione Ambientale Integrata – AIA) and hence, at least once a year, they have to verify compliance with the parameters specified in the permits and are required to monitor the quality and quantity of volumes discharged. All the events that may bring about significant alterations to the quality and quantity of the waters discharged are subjected to in-depth analysis (Management Of Change – MOC), such as any environmental incidents or out-of-specification parameters.

In most cases, 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).

The Nippon Gases Italia Group is particularly attentive to the use and the impacts on water resources, also in consideration of the different levels of water stress to which the areas of its plants are subjected. According to the Water Risk Atlas of the World Resources Institute, the level of water stress changes from area to area, and it 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 the sites where evaporative towers are operated and where water is used to wash the equipment, water volumes are partly recirculated to reduce withdrawal. 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, in the Ravenna plant, where there is a fractionation column (ASU), a “Water Stress Management” project was started during FYE2022 in order to reduce the water consumption of the cooling towers by increasing the number of water cycles. Based on the results of the project, its implementation will also be studied in other plants with high water consumption.





4. Collaborative

Our highly qualified and experienced workforce is the cornerstone of **Nippon Gases'** success. We are a great company because we have a great team, thanks to a diverse and inclusive talent management that leads us to achieve people excellence - the lever that enables a collaborative spirit with all our stakeholders.

We engage and collaborate with our customers, suppliers, employees, shareholders and communities in order to understand how we can benefit each other and grow by moving forward together, enabling industries to advance thanks to our technological solutions and giving back to the community in the best possible way by fulfilling our social responsibility through our corporate activities.

4. Collaborative

Nippon Gases Italia recognizes its employees' contributions, and the fundamental role they have played in achieving great results and success over the last 100 years.



That's why the Company is so dedicated and pay great attention to personnel management, ensuring a safe and stimulating work environment that encourages diversity, values talents and builds relationships based on collaboration and transparency.

Nippon Gases Italia believes in quality, creativity, and in the impact its work has on the world around. Nippon Gases Italia is proud of having great workers who focus on results, always ready to push their limits and constantly looking for projects that allow them to respond to ever-new challenges.

Ensuring optimal health conditions and a completely safe work environment is our absolute priority. The Company rigorously implements the goals defined by Nippon Gases Europe, in full agreement with the vision and philosophy of the organization and its guiding principles.

1. Attract and engage the best talent

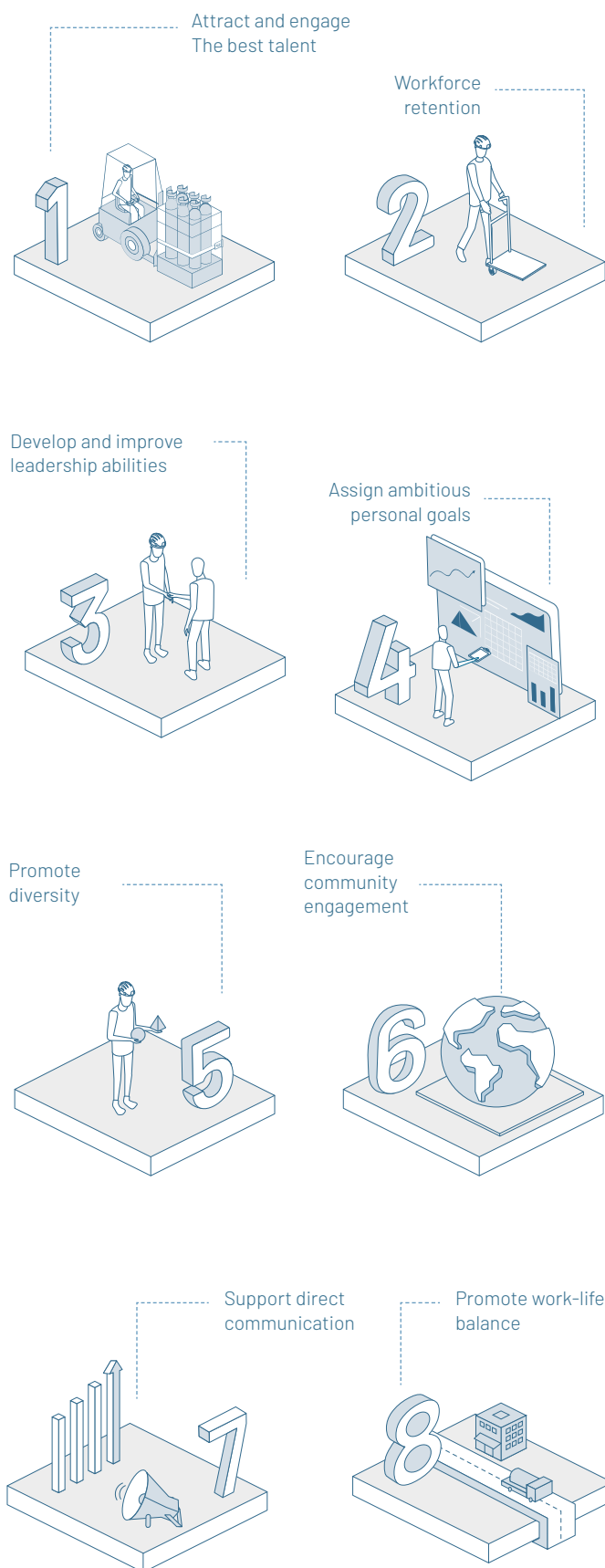
Nippon Gases Italia has always looked to recruit the best talent for its team. The Nippon Gases Italia Group believes in the potential of future generations, and invests in highly-qualified young people by recruiting them directly from universities and providing training programs to introduce them to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

2. Workforce retention

For Nippon Gases Italia, retaining employees starts with providing a safe, stimulating work environment, company welfare policies and opportunities for personal and professional growth.

3. Develop and improve leadership abilities

For Nippon Gases Italia, personal growth means company growth. That's why the Company strives to offer high quality training programs, asking its employees to invest time and energy into increasing their skills and abilities.



4. Assign ambitious personal goals

Nippon Gases Italia implements a personal development plan that rewards the results obtained by each employee in line with company performance, promoting a continuous improvement culture.

5. Promote diversity

Diversity is one of Nippon Gases Italia’s guiding values, which the Company strives to promote each day, condemning all forms of discrimination. This has included increasing the female workforce, because Nippon Gases Italia believes “there are no male positions in the Company.”

6. Encourage community engagement

Nippon Gases Italia believes it’s important to create stable, long-term relationships with the communities in which it operates. Over the years, the Company has carried out numerous community engagement programs, including supporting local authorities and guided visits to plants.

7. Support direct communication

For Nippon Gases Italia, direct, transparent communication forms the basis for long-term relationships. The Company intranet, social media pages, website, and the “invisibilemavero” blog are valuable tools. Alongside daily dialogue and discussion, they help facilitate communication with the Company.

8. Promote work-life balance

Nippon Gases Italia knows that for employees to give their best, their personal lives and free time must be respected. This approach leads to more motivated employees, but also ensures a safer environment and safety at work. During FYE2022, employees were invited to participate in a webinar series aimed at raising awareness of these guiding principles among the corporate population, based on concrete experiences in the areas of work-life balance and leadership development.

Marco Gallo



Corporate welfare is a central issue for the sustainable development of companies and their people. How is this concept implemented in the Nippon Gases Italia Group?

People are our most important resource, and we are aware that only through their protection and continuous development we can continue to be successful, especially in the rapidly changing environment in which we live. First came the crisis generated by the pandemic followed by the outbreak of the Russia-Ukraine conflict; it is inevitable that societies will have to adapt to this scenario and become increasingly aware of the importance of adopting responsible behaviour geared towards sustainable development, and thus also change their management practices to some extent. Among the main drivers of change, one is certainly remote working, or so-called "smart working", which Nippon Gases Italia has decided to make permanent 6 days a month. We came to this decision because the pandemic provided companies with a valuable opportunity to reorganise their working practices and methods and to understand the scale of remote working. To reconcile the protection of workers' health and safety with the need for continuity of production activities, smart working

has been extensively utilised wherever compatible with the tasks performed. Having overcome the crisis, this need has evolved into an opportunity through which the company intends to confirm its focus on its people, which has resulted in the decision to consolidate the use of smart working.

The agreement aims to pursue significant increases in the personal well-being of employees, not only by fostering greater work-life balance, but also by developing their professional skills by valorising their degree of autonomy and their commitment to objectives and results, while at the same time strengthening the relationship of trust with the respective managers.

Furthermore, work-life balance enables an increase in the sense of cohesion and belonging to the Group and in the long run contributes to building a competitive advantage for the company.

Finally, the so-called hybrid-working mode plays a key role in attracting and retaining talent.

Speaking of talent, what are your current recruiting policies?

Employment is a key factor for the company in ensuring both the maintenance of adequate employment levels and to increase core expertise for the business.

During the fiscal year that has just ended, we can proudly state that Nippon Gases Italia Group's workforce grew by 2.5% despite the uncertain and difficult economic environment.

Furthermore, in line with the guidelines of the European Holding, the company is taking the opportunity to hire more and more women with technical and scientific studies educational backgrounds in the STEM (Science, Technology, Engineering and Mathematics) disciplines, in order to offer them better opportunities for professional development, even in fields considered predominantly male.

In addition to talent development, motivating people also requires continuous learning. What training programmes does Nippon Gases Italia offer?

Ongoing training is essential for our company. We are constantly investing in the development of training courses on topics regarded as strategic, such as health, occupational safety and environment, compliance and IT security, and not just complying with legal obligations. Training is provided to all Group employees without any distinction of contract, level, classification or organisational position with the aim, on the one hand, of enhancing and disseminating the Group's distinctive know-how and, on the other, of developing and increasing new transversal skills with a view to continuous training.

Despite the continuing pandemic, the commitment to training initiatives has remained at high levels thanks to the use of new ways to engage participants, i.e. blended methods. These practices will be maintained in the coming years in order to reconcile the flexibility and potential of digital training with the effectiveness and interactivity of face-to-face training.

For several years, we have been continuously investing in the development of an effective and inclusive leadership model aimed at employees already in management positions and those who have the potential to become the leaders of the future.

In an effort to create a training environment that accompanies the professional growth of its employees, Nippon Gases Italia has

joined the European programme referred to as GOL - Growing Our Leadership, dedicated to leadership techniques.

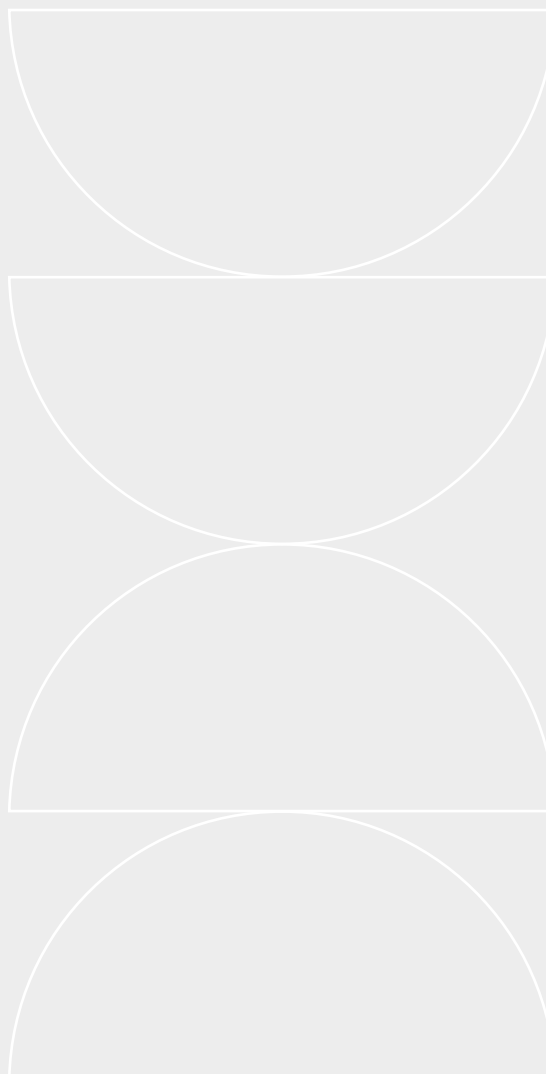
15 middle management representatives were selected to participate in the programme, which was divided into 4 modules.

The participants were asked to develop an innovative project: the best project will be selected and presented to the European Directors.

The principles of diversity and inclusion, together with those of safety and compliance, reflect the values that guide the Group's daily operations. Can you tell us what strategies have been implemented to support them?

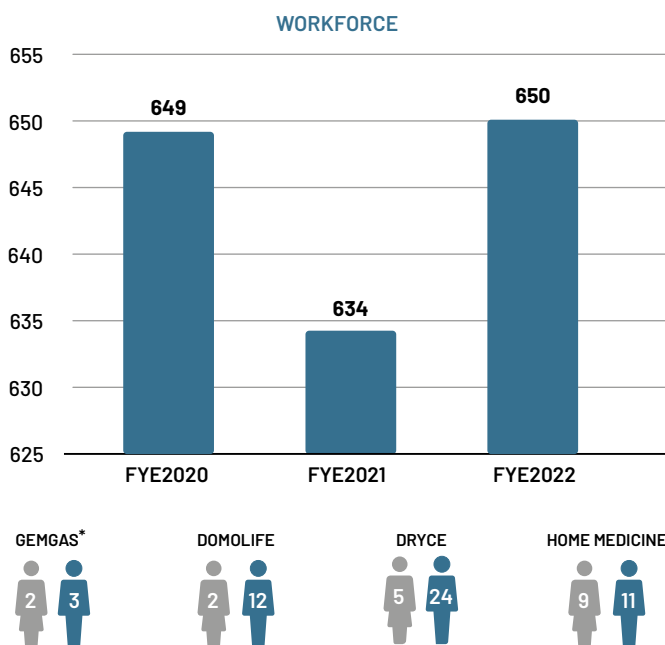
At Nippon Gases, we reject any form of discrimination based on ethnicity, skin colour, gender, age, disability, sexual orientation, religion, political opinion, nationality and social origin. We are committed to developing and maintaining an inclusive work environment, free from all forms of violence, ensuring respect, integrity, personal development and equal opportunities. For this reason, specific European programmes have also been implemented in Italy that aim to help create a sustainable and inclusive culture.

One of these is WING, (Women's Ikigai Nippon Gases) which was set up to promote an equal presence and balance of men and women within the company, at both operational and management levels, and to combat all forms of discrimination. A second example is the EQUALS programme, which aims to support the LGBTIQ+ community born within Nippon Gases and its related supporters by building awareness about prejudice and celebrating our diversity.



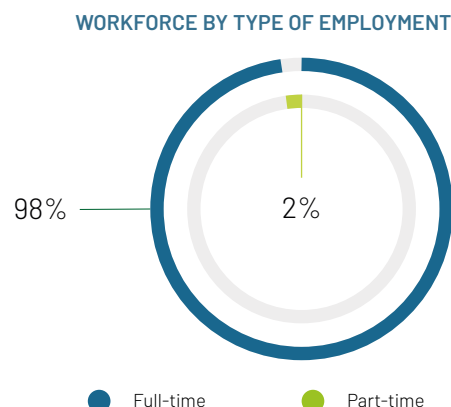
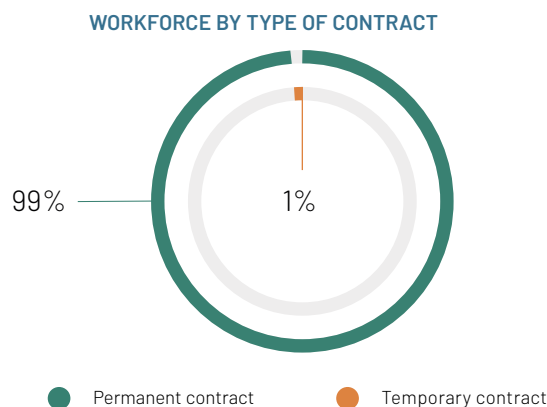
4.1 Working for Nippon Gases Italia

On 31st March 2022, the workforce of Nippon Gases Italia was composed of 650 employees, increased by 2.5% over FYE2021. As in the year before, the number of company personnel does not include the employees of subsidiaries GemGas S.r.l., Domolife S.r.l. and Dryce S.r.l., Nuova Pescarito S.r.l. and Home Medicine S.r.l., which, taken together, provide work for 68 people. Besides the 650 people hired on a permanent basis, at the end of the fiscal year, Nippon Gases Italia employed 22 temporary workers and 4 internships. In this regard, there were 15 internships activated during the year, confirming the Group's willingness to actively promote the job placement of the younger generation.



* Company GemGas S.r.l. includes Nuova Pescarito S.r.l.

98% of company employees have a full-time contract and 99% of the workforce have a permanent contract attesting the commitment of Nippon Gases Italia to the creation of stable jobs and long-term relationships with its people.



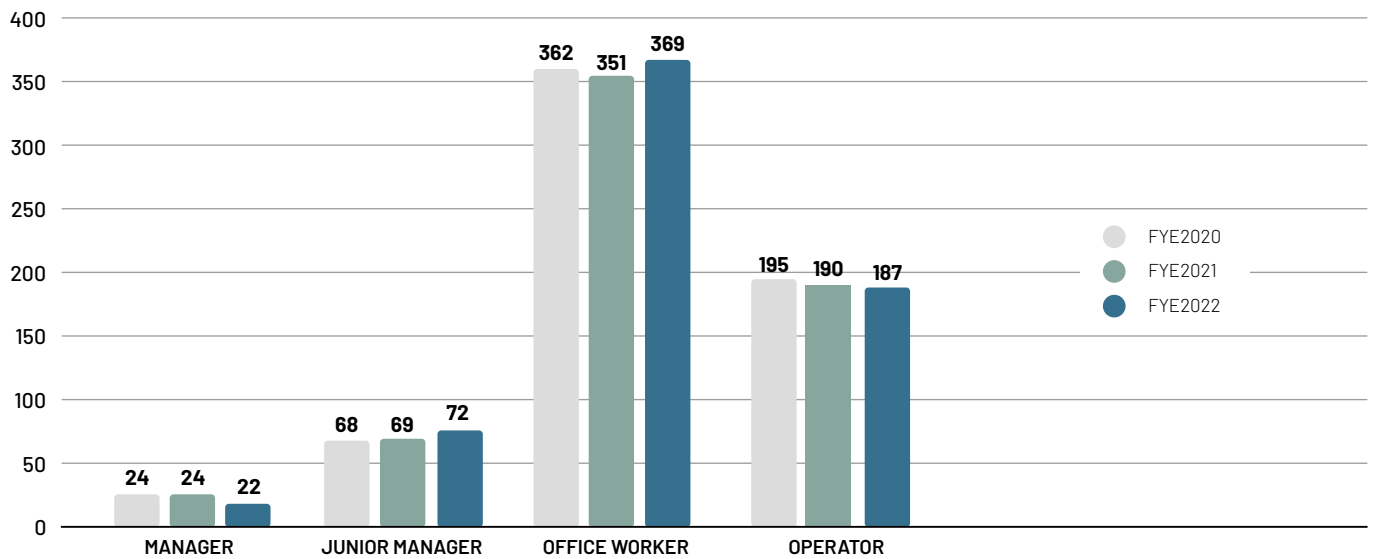
HOME MEDICINE joins NIPPON GASES ITALIA GROUP

Among the Group's subsidiaries, FYE2022 saw the introduction of Home Medicine, the Group's investment in the telemedicine sector, which provides human health with expertise and technology to ensure a higher quality of care. Home Medicine S.r.l. is active in the field of integrated home care with innovative digital solutions capable of ensuring high quality healthcare services, clinical surveillance and home care, as well as remote visits and consultations and constant monitoring for patients with complex clinical needs, fragility and multi-chronicity. It is a choice consistent with Nippon Gases Italia's corporate history of identifying technological applications and innovative solutions for its customers, always staying in line with the times, adapting to changes and often anticipating them. With Home Medicine, 20 new resources have joined the group mostly employed in the Campania and Molise regions.

The workforce primarily consists of office workers, who account for 56.8% of the total, increased by 5% over the previous year.

The second most numerous group is that of operators, accounting for 28.8% of the workforce, a value substantially in line with the previous year. Junior managers account for 11.1% and managers for 3.4% of company employees.

WORKFORCE BY CATEGORY



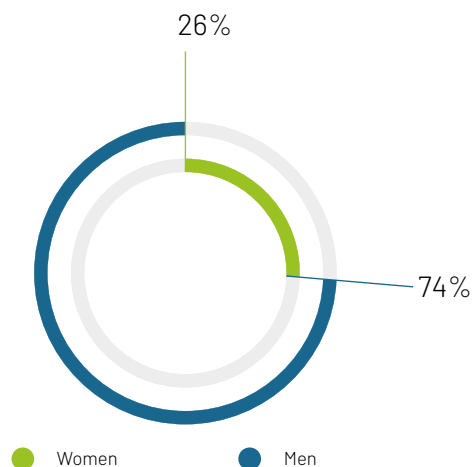
26% of company employees are women, with a slight increase over the previous year. Nippon Gases Italia believes that differences and diversities are strength elements to be promoted and valorised.

In FYE2022, the percentage of women in managerial roles increased, in line with the targets set, also due to the company’s focus on promoting a female workforce with a STEM (Science, Technology, Engineering and Mathematics) background. The **WING sponsorship programme** is an example of the actions taken by Nippon Gases to give visibility to women with STEM degrees within the organisation.

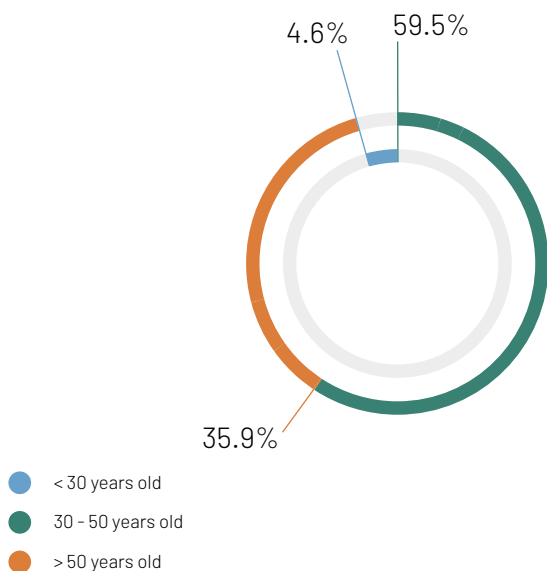
The leadership’s support for this programme demonstrates the high degree of involvement of the entire company population in inclusion and diversity issues.

In terms of equal opportunities, Nippon Gases Italia encourages professional growth according to the principles of merit, in particular through a system of individual performance evaluation it promotes the best results regardless of personal or gender characteristics.

EMPLOYEES BY GENDER (FYE2022)



EMPLOYEES BY AGE GROUP (FYE2022)



The workforce of Nippon Gases Italia is also diversified by age groups. As at 31st March 2022, 59.5% of company personnel are in the 30 to 50 age group, 35.9% are older than 50, and the remaining 4.6% are younger than 30.

Nippon Gases Italia views long-term, transparent relationships with its employees as a decisive competitive edge, and, for this reason, is strongly committed to strengthening these relationships and mutual trust, through cross-functional initiatives and projects.

For younger employees, whose vertical growth occurs gradually over time, the company has in place an induction plan, opportunities for horizontal growth through experiences in different departments and, whenever possible, a professional development plan to guarantee a continuous growth in know-how and skills. Moreover, Nippon Gases Italia applies variable incentive schemes as a function company performance and the goals reached by each individual employee. In this setting, starting in FYE2020, a performance management programme takes into account some company goals and some professional development goals, selected on the basis of role within the company and seniority.

In FYE2022, 389 people participated in the programme, a significant increase of 34% compared to the previous year. This is a European programme adopted by the entire Nippon Gases group, which will continue to be gradually extended to the majority of company personnel. The programme 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. Thus, skills development goals make it possible to prepare individual development plans to support professional growth, and, together with company performance, constitute the criterion for the awarding of annual prizes.

The programme is greatly appreciated, especially by the younger resources who recognise its advantages in terms of transparency and results. Nippon Gases Italia firmly believes that a comfortable and peaceful working environment brings benefits in terms both of employee motivation and of satisfaction with the attainment of company goals.



WING

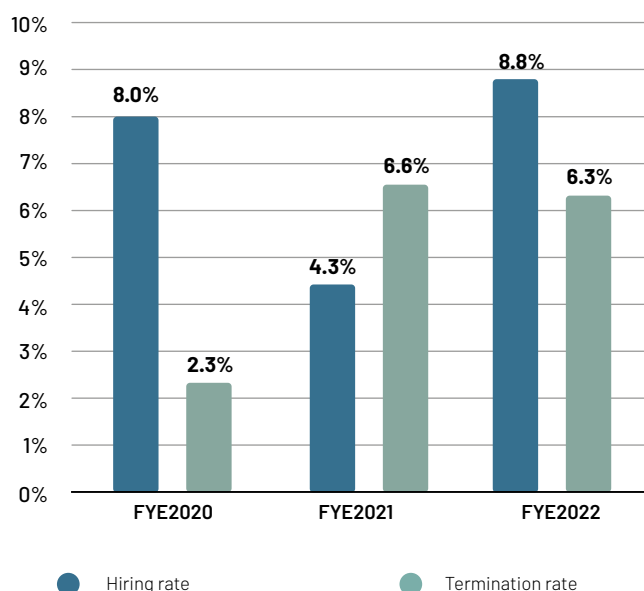
Supported by a sponsorship programme involving 15 women at an international level, the WING (acronym for Women's Ikigai Nippon Gases) network is designed to promote equal representation and balance between men and women within the company, at both operational and management levels, and to combat all forms of discrimination through targeted actions, such as improving the quality of life of its employees and paying special attention to gender balance and the development of women and their leadership skills.

The Group will also, through this activity, promote mentoring programmes, create gender balance initiatives and develop ad hoc awareness-raising campaigns, engaging in the dissemination and promotion of a more inclusive corporate culture.

January 2019 saw the launch of a company welfare platform 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 can be tapped to pay for goods, services and benefits, depending on personal and family needs. The amount was confirmed for 2022.

FYE2022 continued to be impacted by the consequences of the economic situation in relation to the pandemic, which inevitably had repercussions in the corporate sphere, leading to a general decline in hiring and an increase in terminations in Italy. Notwithstanding the difficult situation, Nippon Gases Italia hired 57 new employees, corresponding to an 8.8%⁴ hiring rate. At the same time, 41 employees ended their employment relationships with Nippon Gases Italia, with a termination rate of 6.3%⁵.

HIRING AND TERMINATION RATES



SMART WORKING

Over the past two years, the demands imposed by the pandemic have provided companies with the opportunity to reorganise their working methods and practices, as well as to recognise the value of remote working. Two years on and with the end of the state of emergency, we find ourselves having to plan a return to a “new normal”.

The actual experience, in which the application of smart working was a necessity, made it possible to test Nippon Gases Italia’s readiness for change, increasing the individual’s responsibility and direct involvement, and finding a new way of working able to reconcile work and private life, always while guaranteeing the achievement of company objectives.

Having overcome the crisis, this need has evolved into an opportunity with which the company has confirmed its focus on its people, through the definition of a new working dimension that envisages the adoption of the smart working measure on a permanent basis for those employees who have the possibility to work remotely, enabling them to work in “smart working” mode for 6 days a month.

This way of working was in addition to the already established flexible and part-time working arrangements that Nippon Gases Italia has adopted over the years.

In addition, to support education and to support families, Nippon Gases Italia has for several years now established awards for the children of employees who have distinguished themselves in the different school stages: from primary school to university.

⁴ Rate determined as ratio between total number of newly hired and total number of employees at the end of the same accounting period.

⁵ Rate determined as ratio between total number of terminations and total number of employees at the end of the same accounting period.

4.2 Nippon Gases Italia's communication

At Nippon Gases Italia, communication within the organisation is characterised by a structured flow of information designed to build up the employees' sense of belonging to the Nippon Gases Group and promote awareness of their individual roles, so that everyone may play an active part in the attainment of company goals.

Accordingly, an internal communication plan is deemed effective if it increases employees' trust in company policies and strategies and gets across company identity and values.

The Nippon Gases Italia Group uses a series of tools and channels to inform and promote the participation and involvement of people in the life of the company and its activities. Internal communication aims to increase the spread and sharing of information, promoting collaboration, the flow of ideas and innovation.

The main tool is the **WeShare** corporate intranet, which offers visibility to employees and gives prominence to information and initiatives involving them, facilitating the sharing of projects, values, business successes and results, events and corporate objectives.

WeShare also contains policies and procedures, company documents and templates as well as tools for everyday life. There are also training areas as well as all the information related to employee welfare initiatives.

In the course of the fiscal year ending March 2022, more than 200 articles were published on the intranet, consisting of news and service announcements.

Great importance was given to internal communications, which, in the Covid-19 context, conveyed Nippon Gases Italia Group's instructions for combating the spread of the virus.



The sharing of information via the intranet makes the organisation more cohesive, helping to promote change and continuous improvement within it and to strengthen awareness on issues of special relevance to the company such as security and compliance.

For this purpose, teleconferences and meetings with management are also organised periodically in the case of special events or to deal with relevant or strategic topics in which all employees are invited to participate.

Internal communication at Nippon Gases Italia is part of Corporate Communication and in order to transparently convey the Group's information, it makes use of numerous other channels in addition to the local intranet.

WECONNECT is the Nippon Gases Europe Group intranet through which news and information of common interest is shared at Group level. It has recently been completely revamped in terms of graphics, design and content organisation.

KONNICHIIWA EUROPE is the quarterly magazine published for all employees of the Nippon Gases Europe Group on specific topics, granting wide attention to interviews with top management and highlighting relevant projects, in the drafting of which the local Communication Teams contribute.

KONNICHIIWA FOR LEADERS is a monthly digital publication for executives and managers and its articles are aimed at strengthening leadership.

KONNICHIWA NSHD is the NSHD Group's quarterly magazine, distributed digitally, which provides an overview of global events; the Japanese Group operates through its various companies in 31 countries and regions around the world, including Southeast Asia, Korea, China, India, Australia and the United States.

LEADERSHIP WEBINAR, which take place quarterly for the entire staff, during which managers of the European Group, working in different business areas, share their experiences on specific topics.

QUARTERLY TELECONFERENCES for all employees at the European level, during which the President of the European Holding and members of top management provide updates on business developments.

TECH TALKS. 45-minute technical webinars run by in-house personnel, designed to share and disseminate knowledge about the gases industry and the company's most technological topics in general.

ONBOARDING WEBINAR This initiative, developed in collaboration with the Group's Human Resources Department at the European level, takes the form of quarterly meetings and is specifically aimed at new recruits. However, it also represents an opportunity for all personnel to broaden their corporate perspective and learn more about the Group and the business in general.

In addition to the dissemination of information, internal communication aims to create engagement among staff and promotes various initiatives to this end.

The ongoing Covid-19 pandemic severely limited the organisation of in-person activities, but nevertheless did not prevent the launch of initiatives that were widely attended, albeit remotely; for example, at Christmas, "Back to Christmas(k) - Let's celebrate together" was organised to encourage the exchange of greetings between the different locations as well as the Christmas Lottery, while for International Women's Day, the "Break The Bias" initiative invited employees to take a stand against prejudice, in its broadest sense.

Finally, great emphasis is placed on welfare initiatives such as the Scholarship for children of employees, who attend schools of all levels and who have performed particularly well during the previous school year.

On the other hand, with a view to external communication, in order to raise awareness and engage customers also in terms of sustainability, a loyalty project was launched in collaboration with Treedom, which, in addition to the allocation of a welcome kit full of 100% green gadgets includes the planting of a tree. The Contract signed with "Treedom" provides for the planting of 500 trees per year for five years, with an estimated 90,900 kg of CO₂ absorbed.



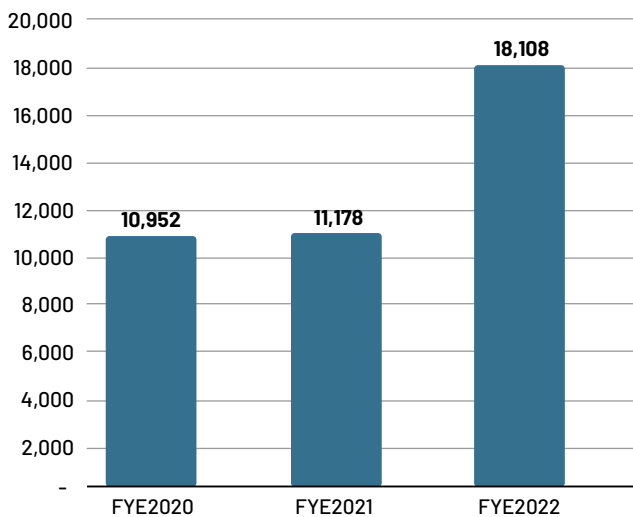
Finally, again as part of the communication efforts aimed at customers, there was also a campaign called "For those who have a winning streak" which involved the sending of 5 newsletters reserved for customers of the Bulk, Package and Pure and Specialty Gas businesses. The newsletters focused on specific sections of the customer portal, describing in detail its contents and functionalities together with a summary of the services offered, including a link to the video that was made to present the platform.

4.3 Training at Nippon Gases Italia

The valorisation and development of the employees is a key factor to ensure the long-term sustainable growth of a company. To this end, Nippon Gases Italia organises numerous training sessions dedicated to the entire company population, paying special attention to content personalisation through an analysis of training requirements and the use of an e-learning portal that can be easily accessed by all employees. The training needs of Nippon Gases Italia employees are identified by the Human Resources Department with the support of the individual function managers through specific interviews provided for in the performance management plan. At the end of each course, its efficacy is evaluated by having the participants compile questionnaires that measure trainee proficiency and trainer performance.

In FYE2022, a total of 18,108 hours of training were administered, with an average of 27.8 hours per person. These figures are higher than in the previous year, when hours of training per person came to 17.6 and added up to a total of 11,178 hours. This increase is due to the numerous training courses held during the fiscal year, as the Group's intention to stabilise and ensure the continuity of training programmes in the company, as well as the regularity of a number of health and safety courses that accounted for over 80% of the total in terms of hours

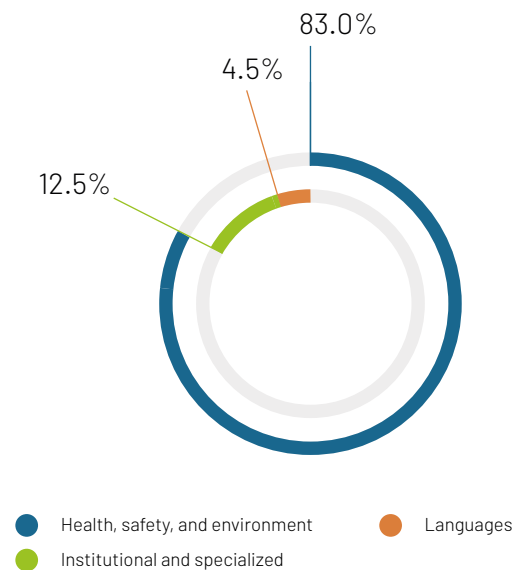
TOTAL HOURS OF TRAINING



The Group believes that the results achieved in the field of security are based on the continuous training and awareness of all employees in carrying out their daily activities while respecting internal procedures.



BREAKDOWN OF TRAINING HOURS (FYE2022)



The safety training process, supervised by the HSE function in cooperation with Human Resources, includes specific training and periodic refresher courses for all personnel, as required by current legislation. Specifically, a new Process Safety training course was launched in FYE2022 for all Nippon Gases Italia operating personnel in the Bulk, Package, Technical Service and Engineering sectors. Process Safety deals with the management of risks associated with the presence, handling, transport, and processing of substances with highly hazardous characteristics, such as flammability, explosiveness and toxicity. It deals with the prevention of events that can lead to very serious consequences and, therefore, requires a specific culture and skills, which must be acquired, deployed, maintained.



The training is based on a real case study, and through a dynamic and interactive approach, aims to stimulate the ability to identify the causes of a potential risky situation and possible solutions.

12.5% of the training hours administered are devoted to institutional and specialist topics. The first category includes training on compliance, the organisational model, quality, Nippon Gases products and technologies, the other addresses specific requests by the employees or meets professional update needs. The last category, which takes up 4.5% of the training hours, consists of language courses. In particular, Nippon Gases Italia gave 49 employees access to a special English learning app that included both autonomous learning activities and the possibility to book video lessons with native English speakers.

In 2020, a training programme on digital awareness was launched in collaboration with Talent Garden, with the aim to achieve a transformation of information flows and processes, which would cut down the redundancies and errors associated with non-strategic activities carried out manually to arrive at the redesign of the existing business models through digital tools.

The 50 participants have worked together over the years to propose initiatives in the area of internal digitalisation, some of which have been implemented within the company.

This year, the groups continued to work on projects, thus moving from the training to the implementation phase. With this programme, Nippon Gases Italia valorised young people and their innovative ideas.

With the aim to create a training environment that would accompany the professional growth of its employees, Nippon Gases Italia implemented the Growing Our Leadership (GOL) programme, adopted at European level, dedicated to leadership techniques. 15 representatives of the company's middle management were selected to take part in this programme divided into 4 modules by seniority and professionalism: Analysis of your own leadership, Knowledge of the business, Change management, Work team Management. The modules took place locally and the participants were divided into 4 groups with the aim of developing an innovative project. The European Directors will evaluate the work done and select the best project, which will then be awarded.

Nippon Gases Italia recognises the importance of training and the continuous updating of its employees on topics ranging from health and safety to those that involve professional development. For this reason, one of the Group's objectives is to make courses a compulsory and ongoing requirement for all employees. This aim is embodied in the establishment of an internal Group Academy to organise and deliver all training courses.

4.4 Health and Safety: a top priority for Nippon Gases Italia

For Nippon Gases Italia Group, safeguarding the health and safety of its employees is a top priority and an essential value at the basis of all activities. This translated into full compliance with the applicable regulations and the health and safety policies of the Group and in the voluntary adoption of ISO 45001:2018. Nippon Gases Italia undertakes to guarantee safe conditions in the workplace, analyse and minimise the risks identified, invest in training and new equipment and monitor closely employee behaviour to make sure it is in keeping with company procedures.

Health, Safety and Environment (HSE) Department collaborates with the Management and Function Managers in order to plan health and safety-related activities and to define roles and responsibilities, in compliance with Italian Legislative Decree 81/08, the applicable regulations, ISO 45001 and company policies. It also defines the training and information needs of the employees and to provide support to the Procurement Office and the operational functions with the qualifications of contractors from the standpoint of Safety and Environment. As stated in the company policy on Health, Safety and the Environment, Nippon Gases Italia believes it is essential to provide appropriate specific training on the subject of Health and Safety to all employees and workers, even beyond the legal requirements, by including many additional contents and topics, according to the rules adopted voluntarily, the requirements of Nippon Gases Europe and other specific training programmes.

On a quarterly basis, all company plant employees and operational functions employees participate in meetings dedicated to safety, with training initiatives encompassing a variety of topics, such as risks and protection measures, the management of emergencies, the proper use of PPE and the safety programmes of Nippon Gases Italia. Every year, a session, included also administrative employees is devoted to the Safety Excellence Journey (SEJ), where the participants discuss contents common to the entire Nippon Gases Group, and top management reasserts its commitment to safeguarding employee health and safety.

This year's campaign slogan was "A Near-Miss Today - An Accident Tomorrow" and was inspired by the first safety

principle: all accidents can be prevented, emphasising the importance of awareness regarding all potential dangerous situations, no matter how insignificant they may seem.

Nippon Gases Italia's internal Prevention and Protection Service is manned by a Prevention and Protection Service Manager (RSPP) and a six-person staff (ASPP).

Also working in this connection are about seventeen Workers' Representative for Safety (RLS) and more than 150 people in charge of first aid and emergency response over the entire national territory.

In FYE2022 Nippon Gases Italia actively contributed to the revision and update of the Safety, Health and Environmental standards of Nippon Gases Europe, and to development of a new Intellex database for the management of HSE events and the relative action plans. During this fiscal year, the work of the Crisis Committee and the coordinating physician for the management and control of Covid-19 infections continued, in order to adapt the regulations to the legislative changes and new provisions.



Gennaro Parasileno



supported the flu vaccination campaign by offering its employees the opportunity to receive this vaccine free of charge. Indeed, the World Health Organisation indicates as the primary goal of influenza vaccination the prevention of severe and complicated forms of influenza, to lower the incidence of acute respiratory diseases in the population and to facilitate differential diagnosis between COVID-19 and other respiratory pathogens characterised by symptoms such as fever and cough.

In general, how do you assess the safety performance of the Nippon Gases Italia Group?

We are satisfied with the results achieved in the fiscal year 2022, and we hope that they will also be a good sign in terms of the one that has just begun.

As confirmation of our good performance, several of our sites have received the Safety at Work Awards, assigned by Assogastecnici, respectively for 5 years (Castelnuovo Berardenga (SI), Naples, Parma), and 10 years (Verres (AO)) without accidents as recognition of their achievements, which certifies the attention paid to the safety of workers in the installations. A safety award was also given by Assogastecnici to Tecnoimpianti, an external company that works for the Nippon Gases Italia Group carrying out maintenance on cryogenic tanks and installations.

Prizes are awarded to company sites, with at least 10 employees, where production and/or technical assistance is carried out. A condition for assignment is that there have been no accidents involving personnel for a minimum period of five years, for each five-year period, up to a maximum period of 25 years.

I am also very proud to be able to announce that Nippon Gases Italia has been awarded, for the second year in a row, the EIGA (European Industrial Gases Association) Safety Innovation Award for the year 2021. This award was presented at EIGA summer session on 3rd June 2022 in Valencia. EIGA is the European Industrial Gas Association, a safety and technology-oriented organisation representing most European and some non-European companies producing and distributing industrial, medical and food gases.

How are Occupational Health and Safety and Sustainability interrelated at Nippon Gases Italia?

The concept of Sustainable Development also brings with it the issue of working conditions and, specifically, the protection of workers' health and safety. Nippon Gases Italia is committed, throughout its organisation, to the dissemination and consolidation of the culture of health and safety, promoting the adoption of responsible behaviour and encouraging ever-increasing care so that every work task is carried out in compliance with the company's rules of conduct.

We see *Occupational Safety* not as mere compliance with the regulations, but instead as a strategy, that puts our people at the very heart of our business, in order to protect their well-being. We have sound procedures and safety principles governing our business and constantly verify that they are implemented, but we also ask for the continuous commitment of employees, as it is fundamental to achieving and consolidating our safety goals.

How do you manage to create an environment where employees are committed to safety?

Health and safety, not only within the workplace, must be pursued through a

culture of prevention that is created, first and foremost, through training. All our employees have a responsibility to become active participants in fostering this ethos in the company as well as at home and in the communities in which we operate.

On the subject of training, for example, a structured course is organised every year for all Group sites and therefore at Nippon Gases Italia, which lasts about a month. It is called *Safety Excellence Journey* and is the most important training and information initiative of our Group.

This underlines another of our safety principles: commitment to safety generates safety results, and each of us is aware that we must make our own contribution to making Nippon Gases a safe and therefore more sustainable company.

What additional measures did you take in the recently concluded fiscal year to safeguard the health of your employees from the pandemic?

Aware that the pandemic was by no means over, we continued to take special measures to secure our plants and offices; in this way, we were able to ensure business continuity and contain the risk of contagion within the organisation.

In addition, the Nippon Gases Italia Group

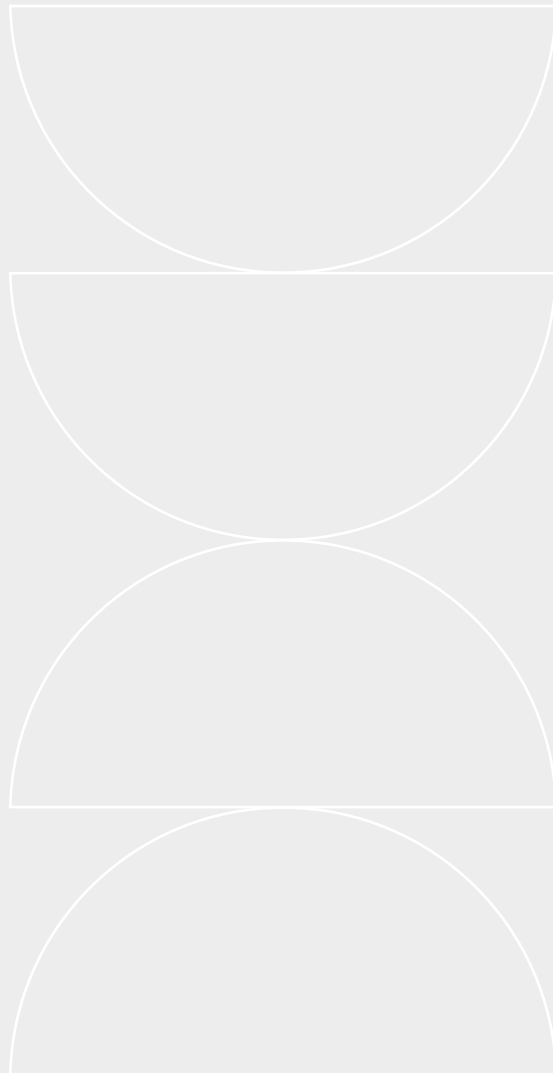
The project that won us this award is the "Remote Job Safety Observations" an excellent tool to make remote observations on the occupational safety of drivers or transporters or contractors while carrying out operational activities for our Group. This important recognition is a source of satisfaction in terms of what we have helped to achieve, pride for the company we work for and a further incentive to do even better.

The awards we have received are the crowning achievement after a long period of scrupulous application of procedures and company regulations in terms of safety. As stated in our values, these awards testify that efforts in safety yield results in safety.

From an environmental point of view, what is the impact of Nippon Gases Italia?

There are several areas where the company's activities can have an environmental impact. However, it must be said that the process of separating the air from which main cryogenic gases (nitrogen, oxygen and argon) and the subsequent process of packaging in containers are both environmentally friendly; the main raw material is room air and emissions are negligible. Waste production is minimal and the water in the fractionation columns is only used for cooling purposes, with no external contaminants introduced into the flow and mostly recirculating in a closed circuit.

The main noteworthy emissions are related to the use of electricity in our production facilities and fuel for the distribution of our products with trucks, but Nippon Gases' goal is to continue to invest in advanced technologies to make our production processes more efficient and environmental friendly.



Attesting the great importance attributed to the health and safety of employees, customers, suppliers and collaborators, Nippon Gases Italia can boast a team of experts who assess the environmental, health and safety risks associated with every new product put on the market by analysing the product's entire life cycle and taking into consideration both the technical risks associated with a product or service and the risk it may pose to the reputation of the brand.

In FYE2022 Nippon Gases Italia adopted a 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 2021, 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, which in this version is online instead of using paper, to verify that the correct security procedures are followed. During the year around 200 observations were carried out, and given the positive response to the initiative, the Group plans to use this technology more and more frequently to ensure safety in unloading operations.

Nippon Gases Italia 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, for the second consecutive year, no accidents at work were recorded for employees and the "Zero LTI (Lost Time Injury)" objective was achieved, confirming the close attention paid by the Nippon Gases Italia Group to health and safety issues.

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



In particular, for the plants that come under the scope of Legislative Decree 105/2015⁶ Nippon Gases Italia provides information for the public at large within the framework of the presentation of the Notification via the ISPRA portal, supplies the required information to the authorities in charge and collaborates with the latter to the development and update of External Emergency Plans (PEE) and the execution of the relative drills.

To handle possible emergencies arising from accidental releases of toxic gases, Nippon Gases Italia has deployed at strategic points throughout the national territory, personnel specifically trained and in possession of the necessary equipment to guarantee an immediate and effective response.

In view of the widespread distribution of its customers, transport safety is of the utmost importance for Nippon Gases Italia, which has always paid undivided attention to driver training, especially in terms of health and safety matters. In particular, all the vehicles used for the transport of gases are equipped with advanced systems for vehicle stability control and drive monitoring systems.

⁶ 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.

In fact, all the vehicles used for the distribution products are equipped with **Mix Telematics** equipment that allows drivers' driving styles to be monitored in order to increase the safety level of driving, achieve the company's 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

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 Italia has equipped its entire product transport vehicle fleet with **frontal cameras** installed in the driver's cab and facing the road. These, in addition to the Mix Telematics system installed in the vehicles, 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 authorisation was obtained from the

transport companies, which involved both the drivers and the trade unions for this project. In addition, the vehicles used in the transport of compressed packaged gases are also equipped with rear cameras to check the stowage and clamping conditions of the load.

These technologies in the service of transport safety were presented during the National Meeting of Safety held in Stresa (VB) and organised by Assogastecnici (National Association of Technical, Special and Medicinal Gases, part of Federchimica) in November 2021.

In FYE2022, more than 200 employees from operational functions were involved in a training project on the topic of Safety in the Transport of Dangerous Goods.

The course included both a part dedicated to the transport of cylinders and containers as well as one for tanker transport, with the aim of raising the awareness of the participants in a responsible and conscious handling of the transport of dangerous goods.

This issue is governed by the ADR text (European Agreement concerning the International Carriage of Dangerous Goods by Road), which is updated every two years, and is addressed to "All persons whose functions have to do with the carriage of dangerous goods by road who must have received [...] training in the provisions governing the carriage of these goods, corresponding to their responsibilities and roles."

This requirement therefore applies to all personnel involved in loading and unloading, handling and preparing the documentation required for the transport of dangerous goods.



4.5 Suppliers: an important component of the team

Suppliers play a key role in ensuring optimised and efficient production processes for their customers. All Nippon Gases Italia's suppliers are qualified and registered in the supplier's portal, an interactive system that makes it possible to simplify communications and optimise administrative work. Each supplier is required to ensure the same level of commitment and conduct required of Nippon Gases employees.

To access the Nippon Gases Italia vendor list, potential suppliers must register in the supplier portal by filling in the various questionnaires with the required information and uploading the necessary documents, after which following a review of the documentation by the Purchasing department and the other departments involved, they proceed to codification.

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. All suppliers are regularly monitored and evaluated by taking into account aspects such as quality of the products/services supplied, environmental impact, and safety performance. The six stages of the procurement process of Nippon Gases Italia:

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

In view of the widespread distribution of the customers served by Nippon Gases Italia, the company mostly uses local suppliers with whom it can offer a more flexible service, while reducing costs and mitigating the environmental impact generated. The procurement chain of Nippon Gases Italia is extensive and diversified.

In FYE2022, a centralised warehouse in Chivasso was introduced to reduce transport routes to northern Italy and optimise shipments to plants and customers. Thanks to this warehouse, an important economic savings was achieved, equivalent to a 27% reduction in courier costs.

Electricity and service providers (considered utilities), together with the other manufacturers that Nippon Gases Italia resorts to, to widen the range of products offered, are the main suppliers in terms of expenditure volumes. 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 Italia buys the best equipment and materials 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 at customer premises.



WINIPPON GAMES



4.6 Success case histories

Nippon Gases believes that an innovative, responsible, and sustainable organisation plays a key role in building a healthy and prosperous 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.

The Earth



Customers



People



4.6.1 The Earth

A Partnership for the development of new low-GWP refrigerant gases



Angelantoni Test Technologies S.r.l., world leader in the production of chambers for simulated environmental tests, has chosen the Nippon Gases Italia Group as a partner for the development of new environmentally friendly refrigerant gases, R-472A and R-472B.

The new refrigerant gas blends offer an extremely low GWP (Global Warming Potential), thus minimising emissions of fluorinated greenhouse gases (GHG), in accordance with the objectives of the European F-Gas Regulation. R-472A has the absolute lowest GWP value (353), 98% lower than other gases used for ultra-low temperature applications (Ultra Low Temperature - ULT) such as R-23, while R-472B is ideal for most standard environmental tests carried out in laboratories around the world and has only 526 GWP, about 96% less than R-23.

The production of these two gases, entrusted exclusively to the Nippon Gases Italia Group, is carried out in the Chivasso laboratory and is another example of our ongoing commitment to decarbonisation.

Nippon Gases Italia collaborates on the redevelopment of sites of national interest

Nippon Gases Italia has partnered with an Italian company for the redevelopment of highly polluted sites.

Nippon Gases Italia's customer works according to circular economy principles to valorise industrial land and waste through efficient and sustainable recovery projects. Nippon Gases Italia analysed the customer's needs and identified that cryo-condensation technology is the ideal choice for the purification of exhaust gas effluents with high solvent concentrations.

Indeed, the cryo-condensation process allows, through the use of liquid nitrogen and the use of special equipment operating at extremely low temperatures, to condense the toxic vapours released in the clean-up.

In this way, atmospheric emissions from the clean-up effort are minimised.

Liquids are extracted safely and with zero air dispersion.

Thanks to a lot of hard work, Nippon Gases Italia has developed a highly innovative supply with a strong environmental focus. Serving people and the environment is part of the Group's commitment to sustainability, and this project makes it possible to realise Nippon Gases' vision of improving the planet through the technological applications of gases.

Remote technical support A.T.R. 2.0

With the aim of increasing customer satisfaction, while maintaining high standards of safety, reliability and innovation, Nippon Gases Italia has reshaped the characteristics of its service to customers, evolving from the concept of simple assistance to the creation of offers developed ad hoc for each customer. Specifically, the Remote Technical Assistance service (A.T.R. 2.0) allows us to resolve breakdowns and problems with the gas supply system installed at the customer's premises, eliminating the time and cost of technical interventions. Taking advantage of the potential benefits offered by Augmented Reality, the customer can get in touch with Nippon Gases with a simple video call, made through the dedicated interface and receive instructions from the technician who will guide him in carrying out maintenance operations on the plant in total safety.

This project is based on five pillars: safety, innovation, technical expertise, R&D and growth. The opportunities offered by modern technologies and new modes of communication make it possible to offer customers predictive maintenance models characterised by greater efficiency, lower costs and reduced environmental impacts, ensuring greater efficiency and safety of the installations.



New ASU in Caserta, powered entirely by renewable energy

Nippon Gases Italia announced the construction of a new Green B.A.G. Farm in Campania. This important investment is part of a series of operations that the group has planned in Italy to increase its competitiveness and proximity to customers, with a focus on certain sectors that are fundamental for the sustainable growth of the industrial sector. The new plant will be powered by 100 per cent renewable sources and will produce the new Green Bulk Atmospheric Gases line, i.e. Nitrogen, Oxygen and Argon.

On 5th December 2021, the Air Separation Unit, manufactured at the Keihin (Japan) plant of Taiyo Nippon Sanso of the NSHD Group, started its journey to the Caserta plant of Nippon Gases Italia.

After a journey of more than two months, the unit arrived in mid-February at the port of Naples, from where it will continue its journey

to its final destination. The Caserta plant will be entirely designed and built by the NSHD Group and will guarantee compliance with the most stringent quality specifications of purity and reliability required by the Pharmaceutical, Medical, Food and Manufacturing markets. It will also be equipped with innovative automation systems that will enable optimum performance in terms of safety and operational efficiency.

The ambitious objective of increasing production capacity will allow Nippon Gases Italia to strengthen its position as a point of reference for the entire Central and Southern Italian basin on the one hand, and on the other will lead to a direct employment development that will favour the related regional allied industries.

4.6.2 Customers

Cogne Acciai Speciali and Nippon Gases Italia extend their partnership

Nippon Gases Italia Group has signed an important multi-year agreement with Cogne Acciai Speciali S.p.A., one of the leading producers of long stainless steels and nickel alloys, for the modernisation of the air separation unit, located in the Aosta steel mill, and the supply of all the gases required for the steel mill's production processes.

The plant will be refurbished and optimised by the Nippon Gases Italia Group to ensure greater production efficiency, lower energy consumption and a consequent reduction in environmental impact, while fully respecting the local community. The contract helps to consolidate the partnership between the two industrial entities, who have thus sanctioned their relationship for the next 15 years.



Oxyfuel furnace: a sustainable choice



European Metals S.r.l., based in Volpiano (TO), is a major producer of rolled aluminium. It was founded in December 2019 following the acquisition of Comital and Lamalu by Dingsheng, a leading Chinese aluminium producer. Nippon Gases Italia Group has signed a contract to supply oxygen for the full oxyfuel operation of the aluminium-smelting furnace.

This technology increased the melt rate, allowing the customer to reduce energy and methane consumption and thus improving the carbon footprint of the process.

Fontana Gruppo chooses Endogreen™

Fontana Gruppo is a world leader in the fastener industry and has grown over the years by acquiring several important companies in the sector.

Fontana Gruppo has recently signed a contract for the supply of 4 new Endogreen™ systems, which is in addition to the 5 already purchased in recent years. Endogreen™ is an exclusive patent of Nippon Gases Italia and is the ideal solution for replacing conventional endothermic generators.

In addition to the advantages of the modular design and thus production flexibility, the Fontana Gruppo's choice is linked to aspects of environmental sustainability in comparison with traditional systems. In addition to reducing methane and electricity consumption, the Endogreen™ uses environmentally friendly and healthy platinum-based catalysts and does not use water for cooling but instead a high-efficiency air heat exchanger.



Nippon Gases Italy contributes to the transport of Covid-19 vaccine doses

The national strategic plan of vaccines for the prevention of SARS-CoV-2 infections has proved to be effective in the face of a high availability of doses and prudent logistical management, to which the Nippon Gases Italia Group, thanks to the company Dryce, is proud to have contributed by supplying containers for the temperature-controlled transport, crucial to maintaining the vaccine's efficacy.

Specifically, Dryce has developed ThermoKube and ThermoBlock, two 100% made-in-Italy solutions for storing vaccine at the pre-set temperature for a duration of between 5 and 10 days based on

the way the packaging is used. These are advanced isothermal containers that provide internal thermal insulation by means of state-of-the-art vacuum panels with very low thermal conductivity. They are developed to withstand the very low temperatures of dry ice, with an extremely low sublimation rate, thus enabling a long shelf life in the cold chain.

Their efficacy and ability to rapidly thermoregulate the vaccines coming in from the pharmaceutical companies made it possible to reduce the time needed to send them to the administration centres, thus simplifying the vaccination campaign.



4.6.3 People

Nippon Gases Italy rewards education

Nippon Gases, for the sixth consecutive year, promoted the initiative to support the education of the group employees' children, with the intention of recognising and rewarding their commitment to study. The criteria for awarding the prize were defined considering the complexity present in the different school levels, and the results obtained in all subjects on the syllabus were considered when calculating the average.

The scholarship is paid in the form of money to the employee whose child's educational achievements are in line with the defined criteria. This year, 108 awards were granted to the children of employees as follows: 35 for primary school, 29 for lower secondary school, 39 for upper secondary school, and 5 for university.



Spreading the Christmas cheer in the community

Before Christmas, some employees of the Nippon Gases Italia Group organised a solidarity initiative to show their support for the children of the family home "Il Girotondo" in Ferentino (FR), giving the children the joy of finding a gift under the Christmas tree.

There are currently eight children in the care of the home on a permanent basis, but the home is also frequented by children with mild disabilities.

The children who wrote their letters to Santa Claus were able to see their wishes come true thanks to the employees of Nippon Gases, who took part in the initiative by choosing a letter and buying the desired gift or making a monetary contribution.

The wishes expressed by the children ranged from toys and small objects such as the strings of a guitar, to singing all together or hoping to return to their families as soon as possible.

The fulfilment of the simplest wishes was intended to show the children that 'they are not alone' and that their future is still to be determined: you just have to want it! Each gift was accompanied by a message from Santa Claus who, of course, always sees and knows everything!

Nippon Gases Italy Christmas Lottery



The last two years of the pandemic have been a difficult period, characterised by restrictions and forced distances. For Christmas, Nippon Gases Italia wanted to symbolically reduce these distances by involving its employees in a number of initiatives to maintain the team spirit that has always distinguished the organisation, while respecting one of the company's core values, safety. For the first year, Nippon Gases Italia organised a Christmas lottery for all its employees. This initiative was designed to involve, stimulate and spread good humour in a highly complex context, offering all employees the chance to win one of the 20 prizes offered by the company.

The drawing of the winning numbers took place on 22nd December 2021 during a on-line live event that was also the occasion for the exchange of Christmas greetings.

Nippon Gases Italia rewards nanoscience research

On 21 September in Rome during NanoInnovation 2021, the annual national nanotechnology conference, the award ceremony for the NEST 2020 Prize, sponsored by Nippon Gases Italia in collaboration with the Scuola Normale Superiore di Pisa, was held.

The NEST (National Enterprise for nanoScience and nanoTechnology) Prize is a competition that promotes and recognises the work of young scientists working in Italy in the field of NanoScience in which researchers under 35 who have published a study in the field of experimental NanoScience in the last two years in an international journal can participate.

The prize is awarded by a judging committee composed of the directors and/or coordinators of NEST, then the Scuola Normale Superiore, the Nanoscience Institute of the National Research Council (CNR) and the Centre for Nanotechnology Innovation of the Italian Institute of Technology (IIT). Young researchers are the engine of the complex machine of research and Nippon Gases Italia recognises their important contribution by continuing to support the above-mentioned Prize for the past 12 years.

Supporting Italian nanoscience research means promoting development and innovation for the entire country. Nanotechnology and nanomaterials are not only applied in the semiconductor, photovoltaic and electronics sectors, but also in the pharmaceutical, diagnostic and therapeutic sectors, with a significant impact on health and the quality of human life.



NEST
SCUOLA NORMALE SUPERIORE

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PREMIO NAZIONALE NEST PER LA NANOSCIENZA ANNO 2020

Riservato a giovani ricercatori di età non superiore a 35 anni, alla data di scadenza fissata al 21 dicembre 2020, che abbiano pubblicato su una rivista scientifica internazionale tra il 1 gennaio 2019 e il 30 novembre 2020, come unici o primi autori, uno studio nell'ambito della nanoscienza sperimentale.

Possono concorrere ricercatori che non afferiscono al Laboratorio NEST, di qualunque nazionalità, a condizione di essere affiliati ad un laboratorio di ricerca in Italia e che lo studio proposto sia stato realizzato almeno in parte in Italia.

Non saranno presi in considerazione lavori presentati in precedenti edizioni del Premio.

Il Premio, che ammonta a 5.000 euro lordi, sarà erogato al vincitore direttamente dalla Ditta NIPPON GASES.

La domanda di ammissione al concorso deve essere compilata e trasmessa entro il 21 dicembre 2020, a pena esclusione, secondo le modalità previste sul sito del Laboratorio NEST all'indirizzo: www.laboratorionest.it

Info e bando su
www.laboratorionest.it
www.rivoltagas.it

The Italy-Japan Foundation recognises the commitment of Nippon Gases Italia in the fight against the COVID-19 pandemic

Nippon Gases Italia has received a warm thank you from the Italy-Japan Foundation that, through a letter of appreciation, expressed its gratitude for the significant work carried out by the company since the beginning of the Covid-19 epidemic in Italy and throughout the entire pandemic.

To quote the letter: "During the most dramatic period of the first lockdown, in fact, Nippon Gases Italia provided support and expertise to hospitals, which were faced with enormous challenges, actively collaborating with many health facilities to address major critical issues. Specifically, the services, products and equipment provided by Nippon Gases Italia have helped hospitals meet the

most urgent supply needs, especially in the area of pulmonary ventilation and sanitisation, and have been instrumental in the distribution of vaccines for cold chain preservation".

This award confirms the good relationship between Italy and Japan and that extraordinary result can be achieved when the two countries join forces for a common goal, and makes our company even more proud of what the Group's employees have done as "The Gas Professionals" and continue to do in the fight against the coronavirus.

In these difficult and unprecedented times, the tireless work of the entire company organisation really made a difference.



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 "1.5 Our Commitment to Sustainability".

The information refers to FYE2022 (from 1st April 2021 to 31st March 2022) 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.

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 relevant aspect.

The drafting of this document took into account the reporting principles for the definition of the contents (stakeholder inclusiveness, sustainability context, materiality and completeness) as well as the reporting principles for the definition of quality (Accuracy, Balance, Clarity, Comparability, Reliability and Timeliness) defined by the GRI Standards. 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.

The calculation methods

We describe below the main calculation methods and assumptions relating to the performance indicators mentioned herein, to supplement the information provided in this document.

- The quantity of greenhouse gas emissions 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.
- 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 determination, the emission factors given in document "International comparisons" published by Terna were used.
- Personnel data (e.g., workforce figures) refer to natural persons as at 31st March of the reporting period

For further information on this document, contact info.italy@nippongases.com

MATERIAL TOPIC	GRI STANDARD	INTERNAL BOUNDARY	EXTERNAL BOUNDARY
GOVERNANCE			
Value generation and distribution to stakeholders	GRI 201: Economic Performance 2016	Nippon Gases Italia	
Compliance, ethics and business integrity	GRI 205: Anti-corruption 2016 GRI 206: Anti-competitive Practices 2016 GRI 307: Environmental Compliance 2016 GRI 419: Socioeconomic Compliance 2016	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	Nippon Gases Italia*	
Employees' professional development	GRI 404: Training and Education 2016	Nippon Gases Italia*	
Diversity and inclusion	GRI 405: Diversity and Equal Opportunity 2016 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	
Quality of products and services	Non-GRI Indicator	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**	
Environmental impact of production	GRI 306: Waste 2020 GRI 303: Water and water discharges 2018	Nippon Gases Italia**	

* 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.

** 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. and Dryce S.r.l.

*** Reporting partially extended to partners and suppliers.



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SCHEMATA
TRANSPORT

servipesa
SISTEMI
PER IL TRASPORTO

Appendix

Additional data for chapter “3. Innovative”

WATER WITHDRAWALS, CONSUMPTION AND DISCHARGES (m³)

	FYE2020	FYE2021	FYE2022
Withdrawals	5,431,199	5,423,571	5,428,463
Discharges	5,127,372	5,118,916	5,081,590
Consumption	303,827	304,655	346,873

DETAIL OF WATER WITHDRAWALS (m³)

	FYE2020	FYE2021	FYE2022
Well water	4,793,547	4,918,847	4,977,612
Surface waters	34,096	34,041	34,576
Municipal water system	18,123	12,557	16,329
Third party water system	553,205	405,195	353,365
Demineralised water	32,228	52,931	46,581
Total	5,431,199	5,423,571	5,428,463

DETAIL OF WATER DISCHARGES (m³)

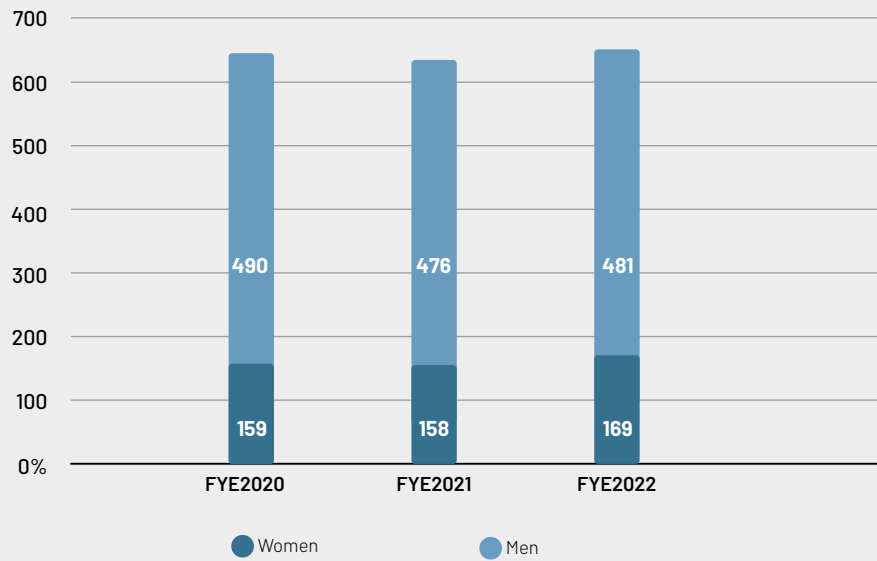
	FYE2020	FYE2021	FYE2022
Well water	-	-	-
Surface waters	4,729,255	4,886,485	4,899,195
Municipal sewer system	7,647	6,046	9,844
Third party sewer system	377,515	214,556	164,121
Recovered vapour water	12,955	11,829	8,430
Total	5,127,372	5,118,916	5,081,590

WASTE PRODUCTION (tons)

	FYE2020		FYE2021		FYE2022	
	Non-hazardous	Hazardous	Non-hazardous	Hazardous	Non-hazardous	Hazardous
Waste earmarked for recycling, reuse and energy recovery	450.5	90.7	411.5	63.1	441.9	19.6
Waste disposed of in landfills	2.7	10.1	56.5	10.2	60.0	47.6
Total waste	453.2	100.8	468.0	73.3	501.9	67.2

Additional data for chapter "4. Collaborative"

STAFF BY GENDER



STAFF BY EMPLOYMENT CONTRACT AND GENDER

	FYE2020		FYE2021		FYE2022	
	Women	Men	Women	Men	Women	Men
Apprenticeship	2	14	2	11	0	4
Fixed-term contract	3	2	0	1	0	0
Permanent	154	474	156	464	169	477
Total	159	490	158	476	169	481

STAFF BY EMPLOYMENT CATEGORY AND GENDER

	FYE2020		FYE2021		FYE2022	
	Women	Men	Women	Men	Women	Men
Full-Time	146	490	150	475	160	480
Part-Time	13	0	8	1	9	1
Total	159	490	158	476	169	481

STAFF BY AGE AND GENDER

	FYE2020		FYE2021		FYE2022	
	Women	Men	Women	Men	Women	Men
<30 years	13	35	5	23	11	19
30-50 years	120	293	117	269	117	270
> 50 years	26	162	36	184	41	192
Total	159	490	158	476	169	481

STAFF BY PROFESSIONAL CATEGORY AND GENDER

	FYE2020		FYE2021		FYE2022	
	Women	Men	Women	Men	Women	Men
Managers	2	22	2	22	2	20
Middle Management	10	58	12	57	12	60
Employees	147	215	144	207	155	214
Operators	0	195	0	190	0	187
Total	159	490	158	476	169	481

NEW HIRES AND TERMINATIONS BY GENDER AND AGE (FYE2022)

	WOMEN				MEN			
	Hired		Terminated		Hired		Terminated	
	Number	Rate ⁷	Number	Rate	Number	Rate	Number	Rate
<30 years old	7	12%	1	2%	8	14%	3	7%
30 - 50 years old	12	21%	6	15%	23	40%	16	39%
>50 years old	2	4%	3	7%	5	9%	12	29%

NEW HIRES AND TERMINATIONS BY GENDER AND AGE (FYE2021)

	WOMEN				MEN			
	Hired		Terminated		Hired		Terminated	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<30 years old	0	-	0	-	5	19%	4	10%
30 - 50 years old	3	11%	1	2%	13	48%	9	21%
>50 years old	0	-	3	7%	6	22%	25	60%

NEW HIRES AND TERMINATIONS BY GENDER AND AGE (FYE2020)

	WOMEN				MEN			
	Hired		Terminated		Hired		Terminated	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<30 years old	2	4%	0	-	12	23%	1	7%
30 - 50 years old	5	10%	5	33%	27	52%	5	33%
>50 years old	1	2%	0	-	5	10%	4	27%

⁷ Rate determined as the ratio between number of hirings/terminations of employees in a given category and the total number of hirings/terminations.

NIPPON GASES ITALIA EMPLOYEES' ACCIDENTS AT WORK OVERVIEW

	FYE2020	FYE2021	FYE2022
Hours worked	1,196,173	1,094,071	1,167,340
Number of injuries	2	-	-
Injury rate ⁸	1.67	-	-
Number of severe injuries ⁹	-	-	-
Severe injury rate	-	-	-
Number of fatalities	-	-	-
Fatality rate	-	-	-

Nippon Gases Italia Group considers cases of absolute inability to work, originating in occasion of work (therefore excluding any in itinere).

EXTERNAL WORKERS' ACCIDENTS AT WORK

	FYE2020	FYE2021	FYE2022
Hours worked	N.A.	487,020	503,814¹⁰
Number of injuries	4	4	3
Injury rate	N.A.	8.21	5.95
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.

⁸ Injury rate: number of injuries * 1,000,000 / hours worked

⁹ Severe injury: injury-entailing absence from work for at least 6 months

¹⁰ 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.



GRI Content Index

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 102: General Disclosures 2016	GENERAL DISCLOSURES			
	ORGANIZATION PROFILE			
	102-1	Name of the organization	1. Nippon Gases Italia - Methodological note	
	102-2	Activities, brands, products, and services	1. Nippon Gases Italia	
	102-3	Location of headquarters	- Back Cover	
	102-4	Location of operations	1. Nippon Gases Italia	
	102-5	Ownership and legal form	1.3 Nippon Gases Italia: Corporate Structure	
	102-6	Markets served	2.5 Proactive: Our markets	
	102-7	Scale of the organization	1. Nippon Gases Italia - Nippon Gases Italia in figures 4.1 Collaborative: Working for Nippon Gases Italia	
	102-8	Information on employees and other workers	4.1 Collaborative: Working for Nippon Gases Italia - Appendix	
	102-9	Supply chain	4.5 Collaborative: Suppliers: an important component of the team	
	102-10	Significant changes to the organization and its supply chain	1.3 Nippon Gases Italia: Corporate Structure 4.5 Collaborative: Suppliers: an important component of the team	
	102-11	Precautionary principle or approach	2.1 Proactive: Our Governance	In all decisions, Nippon Gases Italia incorporates the precautionary principle set out in art. 15 of the Rio Declaration on the environment and development (United Nations Conference of Rio de Janeiro of 3 rd -14 th June, 1992), According to which "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."
	102-12	External initiatives	- For this year of reporting, Nippon Gases did not adhere to external initiatives	
102-13	Membership of associations	1.5 Nippon Gases Italia: Our Commitment to Sustainability		

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 102: General Disclosures 2016	GENERAL DISCLOSURES			
	STRATEGY			
	102-14	Statement from senior decision-maker	- Letter to Stakeholders	
	ETHICS AND INTEGRITY			
	102-16	Values, principles, standards, and norms of behavior	- Our guiding principles	
	GOVERNANCE			
	102-18	Governance structure	2.1 Proactive: Our Governance	
	STAKEHOLDER ENGAGEMENT			
	102-40	List of stakeholder groups	1.5 Nippon Gases Italia: Our Commitment to Sustainability	
	102-41	Collective bargaining agreements	4.1 Collaborative: Working for Nippon Gases Italia	100% of employees are covered by collective bargaining agreements
	102-42	Identifying and selecting stakeholders	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	102-43	Approach to stakeholder engagement	1.5 Nippon Gases Italia: Our Commitment to Sustainability	
	102-44	Key topics and concerns raised	1.5 Nippon Gases Italia: Our Commitment to Sustainability	
	REPORTING PRACTICES			
	102-45	Entities included in the consolidated financial statements	- Methodological note	
	102-46	Defining report content and topic boundaries		
	102-47	List of material topics	1.5 Nippon Gases Italia: Our Commitment to Sustainability	
	102-48	Restatements of information	- Any minor changes are reported in appropriate footnotes	
	102-49	Changes in reporting	- There were no changes to the reporting	
	102-50	Reporting period	- Methodological note	
	102-51	Date of most recent report	- December 2021	
	102-52	Reporting cycle	- Methodological note	
	102-53	Contact point for questions regarding the report		
	102-54	Claims of reporting in accordance with the GRI Standards		
	102-55	GRI content index	- GRI Content Index	
	102-56	External assurance	- This document is not subject to external assurance	

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 200 ECONOMIC INDICATORS				
ECONOMIC PERFORMANCE				
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	2.4 Proactive: The value generated by Nippon Gases Italia	
	103-3	Evaluation of the management approach		
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	2.4 Proactive: The value generated by Nippon Gases Italia	
ANTI-CORRUPTION				
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	2.2 Proactive: Nippon Gases Italia's business integrity standards	
	103-3	Evaluation of the management approach		
GRI 205: Anti-corruption 2016	205-3	Confirmed incidents of corruption and actions taken	2.2 Proactive: Nippon Gases Italia's business integrity standards	
ANTI-COMPETITIVE BEHAVIOR				
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	2.2 Proactive: Nippon Gases Italia's business integrity standards	
	103-3	Evaluation of the management approach		
GRI 206: Anti-competitive behavior 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	2.2 Proactive: Nippon Gases Italia's business integrity standards	

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 300 ENVIRONMENTAL INDICATORS				
GRI 103: Management Approach 2016	ENERGY			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	3.2 Innovative: Nippon Gases Italia's approach to environmental sustainability	
	103-3	Evaluation of the management approach	3.3 Innovative: Management of environmental issues	
GRI 302: Energy 2016	302-1	Energy consumption within the organization	3.3 Innovative: Management of environmental issues	
WATER AND WATER DISCHARGES				
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	3.2 Innovative: Nippon Gases Italia's approach to environmental sustainability	
	103-3	Evaluation of the management approach	3.3 Innovative: Management of environmental issues	
GRI 303: Water and effluents 2018	303-1	Interactions with water as a shared resource	3.3 Innovative: Management of environmental issues	
	303-2	Management of water discharge-related impacts		
	303-3	Water withdrawal	3.3 Innovative: Management of environmental issues - Appendix	
	303-4	Water discharge		
	303-5	Water consumption		
EMISSIONS				
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	3.2 Innovative: Nippon Gases Italia's approach to environmental sustainability	
	103-3	Evaluation of the management approach	3.3 Innovative: Management of environmental issues	
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	3.3 Innovative: Management of environmental issues	
	305-2	Energy indirect (Scope 2) GHG emissions		

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 103: Management Approach 2016	WASTE			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	3.2 Innovative: Nippon Gases Italia's approach to environmental sustainability	
	103-3	Evaluation of the management approach	3.3 Innovative: Management of environmental issues	
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	3.3 Innovative: Management of environmental issues	
	306-2	Management of significant waste-related impacts		
	306-3	Waste generated	3.3 Innovative: Management of environmental issues - Appendix	
GRI 103: Management Approach 2016	ENVIRONMENTAL COMPLIANCE			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	3.2 Innovative: Nippon Gases Italia's approach to environmental sustainability	
	103-3	Evaluation of the management approach	3.3 Innovative: Management of environmental issues	
GRI 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	3.3 Innovative: Management of environmental issues	
GRI 103: Management Approach 2016	GRI 400 SOCIAL INDICATORS			
	EMPLOYMENT			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	4.1 Collaborative: Working for Nippon Gases Italia	
103-3	Evaluation of the management approach			
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	4.1 Collaborative: Working for Nippon Gases Italia - Appendix	

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 103: Management Approach 2016	OCCUPATIONAL HEALTH AND SAFETY			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	2.3 Proactive: Our management systems 4.1 Collaborative: Working for Nippon Gases Italia 4.4 Collaborative: Health and Safety: a top priority for Nippon Gases Italia	
	103-3	Evaluation of the management approach		
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	2.3 Proactive: Our management systems 4.4 Collaborative: Health and Safety: a top priority for Nippon Gases Italia	
	403-2	Hazard identification, risk assessment, and incident investigation		
	403-3	Occupational health services	4.4 Collaborative: Health and Safety: a top priority for Nippon Gases Italia	
	403-4	Worker participation, consultation, and communication on occupational health and safety		
	403-5	Worker training on occupational health and safety	4.1 Collaborative: Working for Nippon Gases Italia 4.4 Collaborative: Health and Safety: a top priority for Nippon Gases Italia	
	403-6	Promotion of worker health		
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4.4 Collaborative: Health and Safety: a top priority for Nippon Gases Italia	
	403-9	Work-related injuries	4.4 Collaborative: Health and Safety: a top priority for Nippon Gases Italia - Appendix	
GRI 103: Management Approach 2016	TRAINING AND EDUCATION			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components		
	103-3	Evaluation of the management approach	4.3 Collaborative: Training at Nippon Gases Italia	
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	4.3 Collaborative: Training at Nippon Gases Italia	Following organisational changes over the last two years, Nippon Gases Italia can report the average training hours per capita but without the breakdown by gender and professional category. The company is committed to including this information in its sustainability documents in the next few years.

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 103: Management Approach 2016	DIVERSITY AND EQUAL OPPORTUNITY			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	4.1 Collaborative: Working for Nippon Gases Italia	
	103-3	Evaluation of the management approach		
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	2.1 Proactive: Our Governance 4.1 Collaborative: Working for Nippon Gases Italia - Appendix	
GRI 103: Management Approach 2016	NON-DISCRIMINATION			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	4.1 Collaborative: Working for Nippon Gases Italia	
	103-3	Evaluation of the management approach		
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	2.2 Proactive: Nippon Gases Italia's business integrity standards 4.1 Collaborative: Working for Nippon Gases Italia	
GRI 103: Management Approach 2016	CUSTOMER HEALTH AND SAFETY			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	3.1 Innovative: We innovate to do our best for our customers	
	103-3	Evaluation of the management approach	3.2 Innovative: Nippon Gases Italia's approach to environmental sustainability	
GRI 416: Customer Health and Safety 2016	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	3.1 Innovative: We innovate to do our best for our customers 3.2 Innovative: 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.

GRI STANDARD	DISCLOSURE	DESCRIPTION OF THE INDICATOR	REFERENCES WITHIN DOCUMENT	NOTES/OMISSIONS
GRI 103: Management Approach 2016	SOCIOECONOMIC COMPLIANCE			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	2.2 Proactive: Nippon Gases Italia's business integrity standards	
	103-3	Evaluation of the management approach		
GRI 419: Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	2.2 Proactive: Nippon Gases Italia's business integrity standards	In the last three years, no confirmed reports have been received regarding non-compliance with laws and regulations on socioeconomic matters.
GRI 103: Management Approach 2016	OTHER MATERIAL TOPICS			
	INNOVATION, RESEARCH AND DEVELOPMENT			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	2.6 Proactive: Solutions offered by Nippon Gases Italia	
103-3	Evaluation of the management approach	3.1 Innovative: We innovate to do our best for our customers		
GRI 103: Management Approach 2016	QUALITY OF PRODUCTS AND SERVICES			
	103-1	Explanation of the material topic and its boundary	1.5 Nippon Gases Italia: Our Commitment to Sustainability - Methodological note	
	103-2	The management approach and its components	2.3 Proactive: Our management systems 2.5 Proactive: Our markets	
	103-3	Evaluation of the management approach	3.1 Innovative: We innovate to do our best for our customers 4.5 Collaborative: Suppliers: an important component of the team	





Nippon Gases Italia S.r.l.

Single-member company subject to management activity
and coordination of Nippon Gases Euro-Holding S.L.U. (Spain)
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