Eni Rewind FOR

2024

A Just Transition

eni

Eni Rewind's Mission

We are Eni's environmental company.
We operate according to the principles of the circular economy
to give new life to industrial land and waste through efficient,
sustainable remediation and revaluation projects.
We base our work on passion, skills and technological research
to regenerate soils, water and recoverable resources.
We believe in dialogue and integration with the communities that host us.

Eni's Mission

We are an energy company.
13 15 We concretely support a just energy transition,
with the objective of preserving our planet
7 12 and promoting an efficient and sustainable
access to energy for all.
9 Our work is based on passion and innovation,
on our unique strengths and skills.
5 10 On the equal dignity of each person, recognising diversity
as a key value for human development.
On the responsibility, integrity and transparency of our actions.
17 We believe in the value of long-term partnerships with the Countries
and communities where we operate, bringing long-lasting prosperity for all.

Global goals for a sustainable development

The 2030 Agenda for Sustainable Development, presented in September 2015, identifies the 17 Sustainable Development Goals (SDGs) which represent the common targets of sustainable development on the current complex social problems. These goals are an important reference for the international community and Eni in managing activities in those Countries in which it operates.

Eni Rewind FOR 2024

A JUST TRANSITION

Disclaimer

Eni Rewind for 2024 is a document published on a yearly basis that contains forward-looking statements relating to the various topics covered therein. Forward-looking statements are founded on Eni Rewind management's reasonable assumptions and beliefs given the information available to them at the time the statements are made. Nevertheless, by their nature, forward-looking statements involve an element of uncertainty as they relate to events and depend on circumstances that may or may not occur in the future and which are, in whole or in part, beyond Eni Rewind's control and reasonable prediction. Actual results may differ from those expressed in such statements, depending on a variety of factors, including, without limitation: actual operating performances, general macroeconomic conditions, geopolitical factors and changes in the regulatory and economic framework, achievements reached in the development and use of new technologies, changes in stakeholders' expectations and other changes to business conditions. Readers of the document are therefore invited to take into account a possible discrepancy between the forward-looking statements made included, to be considered as estimates, and the results that may be achieved as a consequence of the events or factors indicated above. Eni Rewind for 2024 also contains terms such as 'partnership', used for convenience only, without a technical-legal implication. Throughout the document, 'Eni Rewind' is the assumed business name for 'Eni Rewind SpA'. The source text of Eni Rewind for 2024 – unless otherwise stated – is in Italian. Translations into other languages are based on the source text. In the event of discrepancies, the contents of the Italian version prevail over those of the translation into any other language.

Images

All the photos of the covers and the Eni Rewind for 2024 Report come from the Eni photographic archive.

Message to stakeholders

Brindisi - remediation of external areas

Dear Stakeholders,

I am pleased to share an update on the progress of Eni Rewind's activities and main projects as part of the strategy for the growth and consolidation of our positioning in the management of remediation and the treatment, recovery and disposal of water and waste. A sector in which we have been operating for over 20 years, in order to offer to all of Eni groups as well as to private and public customers effective solutions that are tailor-made and innovative, leveraging on the consolidated experience gained in over 100 industrial sites and on technologies and synergies with other Eni business lines.

The progressive expansion of the scope of activities over the years, from the acquisition from Saipem of the waste logistics and environmental engineering business units to the partnership with LabAnalysis, Italian market leader in the environmental testing sector, has enabled us to reinforce and expand our offer of integrated services. A consolidation of our core activities that complements our commitment to development, relaunched starting from 2020, along two growth levers:

1) the progressive acquisition of contracts from non-captive customers, to valorise the experience and know-how gained and progressively reskill the employees engaged in the remediation activities of Eni sites;
2) the realisation of waste treatment plants, preferably on the company's remediated areas and in partnership with leading operators in the sector, in order to help reduce the national capacity gap and optimise recovery and disposal costs.

In this context, we are constantly working to maximise the recovery and reuse of resources, designing remediation interventions also with a view to the future repurposing of decommissioned areas. In this sense, we continue with the aim of valorising the large remediated industrial areas which, due to their size, location and infrastructure, are suitable for new industrial settlements and logistics hubs for the storage and movement of goods.

Among the most significant advances made in 2024, we highlight:

- remediation interventions in 2024 for approximately 600 million euros, which bring the cumulative expenditure since 2003 to approximately 6 billion euros, of which over 80% for historical contamination of sites conferred by law to Eni or acquired following industrial rescue operations, when Eni was still a state-owned company;
- the implementation of the agreement signed between Eni and Edison in July 2023 regarding the sharing of costs for the environmental recovery at the industrial sites that were conferred by Montedison to Enimont in 1989, has made it possible to define both the reimbursement of Edison's share of past costs and the agreements for the continuation of remediation interventions by Eni Rewind with monthly recognition from Edison of future costs, direct and indirect, as well as a mark-up for supervision activities;
- the consolidation of the order portfolio from non-captive customers, such as Kuwait Refining and Chemistry for the remediation of the former Naples plant and Invitalia for the remediation activities of the Bagnoli site (Lots I and II), in addition to the Municipality of Rome for the development of a remediation project aimed at the reuse of the Papareschi Park;
- at the Brindisi site, the testing certification of the Micorosa areas was obtained following the completion of the physical confinement operations, and the remediation intervention of the naturalistic area called 'Protected Oasis' was finalised;
- at the Pieve Vergonte site, we started the diversion activities of the Marmazza river, following the completion of the local authorisation procedures and with the approval, in September 2024, of the Project Variant by the Ministry of Environment and Energy Security (MASE);
- for the Crotone site, in August 2024 the MASE issued the Decree of the Excerpt Operative Remediation Project (POB) phase 2 concerning the areas without TENORM and asbestos, which intends to overcome the constraint placed by the Regional Single Authorising Provision (PAUR) of 2019 on the disposal of hazardous waste in the Sovreco landfill in Crotone; the Local Authorities have requested the annulment of the MASE Decree to the Regional Administrative Court (TAR) which has set the hearing for 18 June 2025;
- in the Waste Management area, during 2024 Eni Rewind managed a total of approximately 1.9 million tonnes of special waste, of which 30% produced by remediation activities and 70% by industrial processes. The waste was sent for recovery or disposal to the network of plants contracted by the company and located throughout national and European territory; the recovery index, which is the ratio between recovered and recoverable waste, stood at around 76%, substantially in line with 2023;
- in Ravenna, the Ponticelle Project is in an advanced stage of construction as both the environmental platform and the biopile plant are expected to be finalised by the end of 2025, while in February 2024 the construction of the Plenitude photovoltaic plant was completed;
- in Cengio, the finalisation of the environmental interventions on soil has made the site areas available for new production initiatives; on 28 March 2025 the preliminary contract was signed for the transfer of the surface rights of area A1 and the ownership of area A4 to a company that intends to build a photovoltaic plant of approximately 10 MWp;
- regarding the project for the construction of a drying and single-combustion plant for urban sludge in an area already undergone remediation at the Porto Marghera site, we are awaiting the convocation of the Decision-making Service Conference (a Ministry-coordinated consultation meeting with public authorities required by Italian law) by the Veneto Region.

In the context of the development and application of proprietary technologies, remediation activities with the implementation of patented e-hyrec® devices (for the selective removal of supernatant in the groundwater) have been going forward, and the application of passive sampling on polyethylene film (for the assessment of organic compounds in soils on volatilisation paths) has been the subject of a dedicated ISPRA Notebook. Furthermore, the implementation of increasingly advanced hydrogeological modelling systems has enabled to reduce water withdrawals and improve the environmental sustainability of hydraulic barriers.

In relation to the initiatives in the territories in which we operate, new activities have been launched: in Ravenna with Versalis we have collaborated with a women's shelter to combat gender-based violence, supporting women who turn to Linea Rosa with recreational and educational activities for their children and with awareness-raising initiatives on the topic for Eni employees. In Gela, on the other hand, together with the other co-located companies, we supported a Food Bank project for the distribution of groceries to support the local people who are most in need.

A key element in achieving all our goals is our people who carry out their work with commitment and passion. To continue being a market leader in the design and execution of remediation and in waste treatment and recovery, we want to further reinforce our competitive positioning, working primarily on the realisation of new treatment plants and on the growth of the order portfolio from customers in Italy and abroad. We are aware that the road to a more sustainable future requires a steady commitment from all the actors involved. In this journey, our work will keep on being guided by the commitment to protecting the environment, health and safety, as well as by the creation of value for stakeholders for a just and sustainable transition.

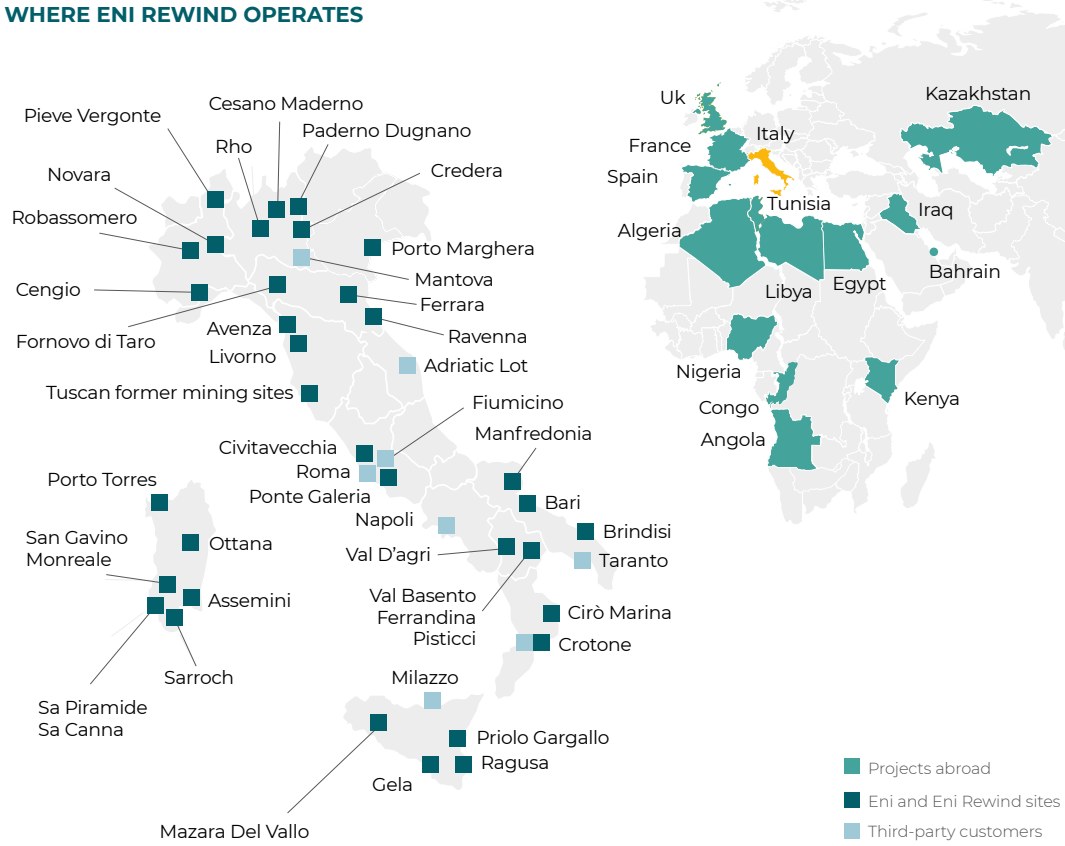
Enjoy the reading.

Paolo Grossi
Chief Executive Officer

Eni Rewind in summary

Eni Rewind is Eni's environmental company and has been committed for over twenty years to environmental remediation and the treatment and recovery of water and waste, with specialised services for all of Eni groups as well as for private and public customers, in Italy and abroad.
Rewind is the acronym for REmediation and Waste INto Development, an effective summary of the company mission.
Today, Eni Rewind, with its team of around 1,000 resources, oversees every phase of the recovery process, from environmental investigations to planning and engineering, up to the implementation of interventions that apply the best available solutions and focus on promoting the future reuse of disused areas. Furthermore, the company, in collaboration with its stakeholders and thanks to a network of partnerships with research institutes and universities, supports innovation through trials and implementation of new remediation technologies. In June 2023, the company has acquired 30% of LabAnalysis Environmental Science, Italian market leader in the environmental testing sector with over 500 specialists.
With a goal of continued progressive growth as a market operator, Eni Rewind has expanded its customer portfolio to include contracts with Edison, Kuwait Refining and Chemistry, Invitalia and Roma Capitale.
The company owns approximately 3,700 hectares of land in Italy, of which about 65% are located in Sites of National Priority. As of 2024, some 68% of Eni Rewind's land is either non-contaminated or remediated, and therefore available for new projects. The remaining 32% has on-going environmental interventions aimed at the reuse of those areas, mainly over the course of the next decade, primarily for developing new plants for renewable energy production and for waste treatment and recovery.

WHERE ENI REWIND OPERATES



Responsible and sustainable approach

For more information Eni for 2024 Sustainability Report

Through its integrated and circular operating model, Eni Rewind is committed to maximising the benefits of resource recovery and reuse, while focusing on environmental protection and on the health necessities of the workers and of the communities in which it operates, in line with Eni's transition strategy. An approach that requires the concrete application of a regenerative systemic vision, in which production, processing and consumption cycles are waste-free and based on the increasing inclusion and participation of the actors involved throughout the supply chain, from institutions and entities to our partners, suppliers and customers. To be truly fair, the transition – for Eni Rewind – must preserve and give new life to natural resources and recover waste and refuse, making the best use of the levers of technological evolution and of economic and social cooperation. Furthermore, implementing a complex and long-term transition cannot overlook the need to prioritise the most effective interventions and synchronise the 'phase-out', as the decommissioning and conversion of obsolete plants and infrastructure, with the 'phase-in', which will enable new technologies and more sustainable services and products. This path will be all the more equitable the more it will succeed in minimising the negative social and economic impacts generated by the change and in supporting development opportunities consistent with the requirements and ambitions of the territories on the basis of direct and indirect workers' needs.

ENI REWIND IN 2024

979 employees

~€1,040 Mln environmental costs

3,717 ha owned (ISAF excluded)

~150 sites where Eni Rewind operates

~400 service stations with environmental activities

~200 active worksites (title IV) nationwide

42 groundwater treatment plants

~84 km total hydraulic barriers

>36 Mln m^3 of water treated

~9 Mln m^3 of water recovered for industrial and environmental purposes

~1.9 Mln ton of total waste managed

~76% of recovered vs. recoverable waste

Gela site - from remediation to requalification

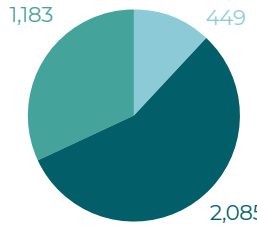
Our Story

Our story is an integral part of Eni's and it begins in 2003, when EniChem transfers its active productive assets to Polimeri Europa (now Versalis) and is renamed Syndial, with the mandate to manage the remediation of former industrial sites, as well as water and waste management. A path that has led to the increase of our environmental know-how, taking on the role of Eni's global contractor in Italy and abroad. In 2019 we chose a new name, Eni Rewind, to complement the company's development towards offering environmental services also to new markets (non-captive).
A history of commitment that is renewed over time.

From 2003 to date Eni Rewind has spent around 6 billion euros on environmental interventions, with over 80% of it used on sites conferred by law or acquired through mergers, as part of the historic industrial rescue operations that Eni had to take over when it was a state-owned company in the 1980s and 1990s.

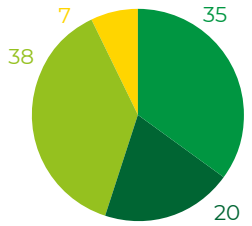
AREAS OWNED AND REMEDIATION COSTS BY SITE ORIGIN

TOTAL AREAS OWNED:
3,717 HECTARES (over 55 ha ISAF)



- Areas with renewables
- Non-contaminated/remediated
- Undergoing environmental interventions

BREAKDOWN OF AREAS BY ORIGIN (%)



- Former Montedison sites
- Sites acquired by law from other companies

COSTS INCURRED BY SITE ORIGIN (Mln €)
TOTAL: 5,760

ESTIMATED COSTS TO BE INCURRED (Mln €)
TOTAL: 2,528

- Sites acquired by law from the SIR-Rumianca Group (1981)
- Historical Eni sites

EVOLUTION AND TRANSFORMATION OVER THE YEARS

1953
THE BIRTH OF ENI
On 10th February 1953, the Parliament establishes the Ente Nazionale Idrocarburi

1982
The chemical plants of the **SIR-Rumianca**, group, following a financial crisis, are transferred to Eni by decree-law

1988
Eni and Montedison transfer their chemical activities to **ENIMONT**, of which Eni acquires total control in 1990

2003
FROM ENICHEM TO SYNDIAL
In 2003, after transferring its active sites to Versalis, EniChem is renamed Syndial and centred on the remediation of decommissioned sites

2005
Gradual expansion to **GLOBAL CONTRACTOR for Eni**
· 2005
incorporation of the activities of Società Ambiente

2016
· 2011-2015
acquisition from Saipem of the waste logistics and designing activities business units
· 2016
Eni R&M entrusts the management of decommissioned sites and service station remediation activities

2018
Extension of activities abroad, starting with the water purification project in the Basra area of Iraq

2019
A NEW NAME
Syndial changes name into Eni Rewind, acronym for REmediation and Waste INto Development, and offers its environmental services also to non-Eni customers, both public and private

2023
Acquisition of 30% of LabAnalysis Environmental Science, market leader in the environmental testing sector

Porto Torres site - historical photo

Porto Torres site - remediation interventions on the Minciaredda area

Eni Rewind's solutions for the market

Eni Rewind has twenty years of experience in the remediation, water and waste management sector, gained at multiple sites with very different industrial and environmental backgrounds, from Eni service stations to Sites of National Priority. Professionalism and expertise have contributed to the progressive portfolio expansion of non-captive initiatives, leading to the acquisition of new customers in the environmental services sector and to the signing of agreements with top market operators for joint participation in new business opportunities. During 2024, the company has consolidated its orders portfolio that includes contracts with both public and private third-party customers including Invitalia, Sogesid, Roma Capitale, Edison, Kuwait Refining and Chemistry, Acciaierie d'Italia and Seram.

Remediation services

| ENVIRONMENTAL PROCUREMENT |
| STAKEHOLDER ENGAGEMENT AND PERMITTING |
| PROJECT MANAGEMENT |

Characterisation /preliminary analysis/ emergency safety measures → Risk analysis → Design (environmental engineering) → Execution → Water management → Waste management → Certification monitoring → Land valorisation/ reconversion

Eni Rewind guarantees the supervision of the entire remediation process at every stage, from matrix characterisation to final certification, through innovative and environmentally sound solutions, at clients' and owned sites, to maximise the effectiveness and efficiency of environmental interventions. The company's operational approach is strongly oriented towards the application of on-site and in-situ technologies, including proprietary Eni and Eni Rewind technologies born out of partnerships with universities and research institutions, such as **e-hyrec®**, **e-lorec®**, **e-limina®** and **passive sampling on LDPE sheets**. The continuous search for technologies aimed at directly treating the source of contamination has led to the testing and application of remediation systems, such as recirculation wells. The experience gained over the years enables Eni Rewind to design, execute and manage the various types of intervention, relying on integrated teams of engineers, project managers and field specialists. The multidisciplinary management of remediation projects includes HSE and procurement services specific to the environmental sector and an in-house **stakeholder engagement** unit to involve interested parties from the project offset so as to create opportunities for the redevelopment and valorisation of the remediated areas.

Crotone - realisation of the D15 deposit

Water treatment and management services

| ENVIRONMENTAL PROCUREMENT |
| AUTOMATION - REMOTISATION |

Process engineering → Construction & Management → Process monitoring → Discharge or recovery of treated water

Eni Rewind carries out groundwater remediation in multiple industrial sectors through hydraulic barrier systems and in-plant treatment as well as via techniques aimed at removing the source of contamination. All water management assets conform to the Best Available Techniques and are examples of exellence at European level for the methodologies and technological solutions adopted. In-house expertise and tools for **hydrogeological modelling**, **automation, remotisation and dynamic control** of treatment plants enable the optimisation of process reliability throughout the supply chain and of operating costs, maximising the recovery of reusable water within industrial sites.

Pieve Vergonte - GTP

Waste management services

| ENVIRONMENTAL PROCUREMENT |
| TRACEABILITY - DOCUMENT MANAGEMENT - PROCESS DIGITALISATION |

Characterisation and management of deposits → Homologation → Logistics planning → Treatment and final disposal/ final recovery → Monitoring and control

Eni Rewind manages the entire waste cycle resulting from industrial activities, remediation and decommissioning of disused facilities, in line with current regulations and industry best practices. Control over the supply chain includes waste characterisation, selecting the best recovery and disposal options and adopting logistics planning systems that minimise costs and environmental impacts (through dedicated software). Activities are ensured through a selected and qualified network of over 90 plants, specialised by type of waste. At the same time, an in-house team of about 110 specialists oversees the traceability system and legal documentation. The company is committed to building new waste treatment and recovery plants, also through cooperation agreements with leading Italian companies in the sector, in order to optimise the supply chain in the medium and long-term as regards to reliability and quality of service, logistics and competitiveness compared to market alternatives.

The Partnership with LabAnalysis

Since 30th June 2023, Eni Rewind holds 30% of the share capital of **LabAnalysis Environmental Science**, a market leader in Italy in the environmental testing sector, founded and led by the Maggi family with a team of over 600 specialists and 17 locations in Italy. The company is part of the LabAnalysis group, founded in 1976 by Prof. Luigino Maggi, also a leader in the field of analysis for the pharmaceutical industry. Through this strategic alliance, the two companies strengthen their integrated range of solutions for the sustainable management of environmental resources, promoting innovation and safeguarding the environment and health. The partnership harnesses both companies' innovative technologies, advanced methodologies and expertise to provide tailor-made solutions that take into account the new environmental challenges in the analyses field. LabAnalysis Environmental Science is accredited by ACCREDIA in compliance with the requirements of UNI CEI EN ISO/IEC 17025 for the main analytes in soil matrices, waste, water intended for human consumption, groundwater, wastewater and gaseous emissions.
With this in mind, the long-term collaborative relationship between Eni Rewind and LabAnalysis is consolidated and has laid the foundations for developing a range of integrated environmental services, even abroad. With the signing of the partnership, Eni Rewind has entrusted about 50% of Eni's environmental testing needs to its subsidiary LabAnalysis, while it continues to use other qualified suppliers to meet the remaining needs.

Certifications and attestations

Eni Rewind's commitment to contributing to the safeguard of the environment, protecting workers' health and safety and providing a quality service to third-party customers is reflected in its rigorous compliance with the relevant legislation in force and in its voluntary participation to an integrated HSEQ management system that has led to the achievement of the certification in accordance with UNI ISO standards. Eni Rewind holds the SOA attestation in its core activities, a certification for participation in tenders for the execution of public works contracts.

UNI EN ISO 14001 of 2015 Environmental management systems - Requirements	The ISO 14001 standard is an international instrument that outlines the parameters of an Environmental Management System, which demonstrates the adoption of a management system that is adequate to keep the impacts of an organisation's activities on the environment under control and strives for constant improvement in an effective and sustainable manner.
UNI EN ISO 9001 of 2015 Quality Management Systems - Principles and glossary	The ISO 9001 standard is an international instrument for the certification of Quality Management System requirements, which guarantees an organisation's competence in executing and monitoring corporate processes, improving the effectiveness and efficiency of services to ensure customer satisfaction and creating value and wellbeing for all stakeholders, while improving the company's competitiveness.
UNI ISO 45001 of 2018 Occupational health and safety management systems - Requirements and guidance for use	The ISO 45001 standard is an international instrument that outlines the requirements for the implementation of the Occupational Health and Safety Management System in order to enable an organisation to provide safe and healthy workplaces by preventing occupational accidents and health problems, as well as continuous and proactive improvement in terms of people's health and safety.
SOA OG 12, OS 14, OS 22 and OS 23 Attestations	Mandatory certification for participation in public tenders to execute works, with an auction amount higher than €150,000. Eni Rewind obtained certification on its core activities, in the general category OG 12 - Environmental remediation and protection works and plants, and in the specialist categories OS 14 - Waste disposal and recovery plants, OS 22 - Water and wastewater treatment plants. Furthermore, since 2024 Eni Rewind has acquired the SOA OS 23 category in the unlimited ranking - Demolition works.

Cengio

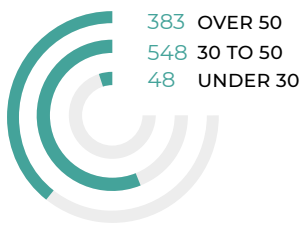
The value of our people

The keys to Eni Rewind's success are its people that, with their skills and energy, hold a pivotal role within the company culture and are a unique asset in its ongoing transformation. People share the company's values, like respect for the environment and the territories in which we operate, as well as its views on dialogue and debate as tools to reach shared goals. The company promotes the valorisation of human capital through an equitable, inclusive and transparent approach, offering opportunities based on shared merit criteria. Eni Rewind's team consisted of 979 people as at 31st December 2024.

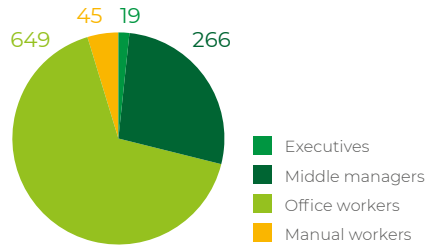
32% women in engineering/R&D

29% women in positions of responsibility

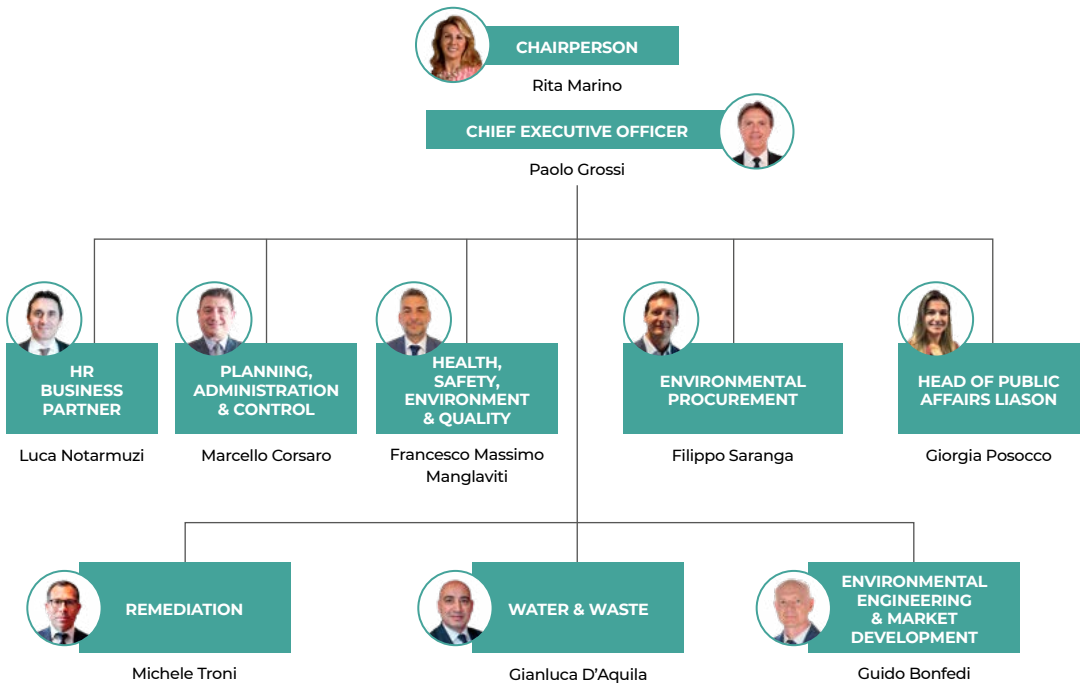
EMPLOYEES BY AGE GROUP IN 2024



EMPLOYEES BY PROFESSIONAL CATEGORY



ENI REWIND ORGANISATIONAL STRUCTURE



Safety and Environment

To contribute to the protection and safeguarding of the health and safety of its employees and suppliers as well as the environment, Eni Rewind deploys measures aimed at minimising the risk factors associated with its various operating contexts, such as organisational models for managing HSE risks, training and skills development, process safety, and the application of new digital technologies to support safety.

THE CULTURE OF SAFETY AND ENVIRONMENT

At Eni Rewind, the HSE culture is central, shared, and involves management, employees and suppliers. Each person is an example and a leader in carrying out their activities safely while adopting an approach aimed at respecting the environment. To this end, the company promotes tools such as Lessons Learned, Safety and Environmental Golden Rules, and promotes initiatives to raise awareness on HSE topics and on the behaviour to adopt while at work.

ASSET INTEGRITY

The asset integrity management system, in line with company procedures, ensures that assets are managed effectively and efficiently to protect people, the environment, and business continuity. The company has surveyed the assets at its sites, grouping them by risk level. The assets are subject to regular audits and improvement actions are monitored over time in order to guarantee high standards of safety and operability.

ENVIRONMENTAL PROTECTION

In line with Eni Rewind's business, environmental protection is promoted as a priority at all organisational levels and is monitored through an accurate analysis of regulatory evolution, which is promptly and rigorously shared, and implemented in the management of activities. Particular attention is also given to the identification of all unsafe environmental conditions, the interception of which, with a preventive perspective, allows the avoidance of environmental accidents.

ACCIDENT RATES AND INTERVENTION ACTIONS

As part of preventing and mitigating health and safety risks, Eni Rewind pursues the goal of zero accidents. When incidental events occur, the episode is investigated and analysed in order to identify what caused it as well as the most effective corrective actions to prevent repetition. In 2024, a frequency rate of 0.2 was recorded, sharply inferior to that registered in 2023 (0.75), also thanks to the initiatives aimed at reinforcing the health and safety culture.

PROCESS SAFETY

In line with the diverse nature of the hazards and risks associated with specific operational activities, process safety is promoted and supported by a widespread culture at all levels of the organisation, including by sharing best practices, known as Process Safety Fundamentals (PSF). Process incidents and near incidents are investigated, and outcomes are communicated to all employees by sharing Lessons Learned. Every year, the company conducts dedicated audits to monitor the proper management of process safety.

Innovation and digitalisation

Eni Rewind is committed to the process of digital transformation and technological innovation to optimise the efficiency and quality of its environmental interventions, minimise risks for the safety of people and ensure the integrity of assets. The levers of innovation and digitisation in Eni Rewind:

- research activities: to shorten the gap between the study and development of new solutions and their implementation in the field, in both remediation projects and waste management;
- in-house technology development in cooperation with Eni;
- partnerships with universities: Polytechnic University of Milan, Polytechnic University of Turin, Bicocca University of Milan, Sapienza University of Rome, Ca' Foscari University of Venice, University of Bologna, Tor Vergata University of Rome, University of Pavia, Federico II University of Naples and the National Research Council (Cnr).

REMEDIATION TECHNOLOGIES BY SITE OF APPLICATION

Matrices	TECHNOLOGIES/SITES	Porto Torres	Crotone	Assemini	Mantova	Priolo	Brindisi	Gela	Manfredonia	Pieve Vergonte	Porto Marghera	Ravenna Ponticelle	Ponte Galeria	Sarroch	Cengio	Ferrara	Service stations
GROUNDWATER	Pump and treat	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Reactive barrier					■											
	Absorbent barrier																■
	Recirculation wells								■								■
	ISCO																■
	Surfactant Enhanced Remediation																■
	Dual Pump	■			■								■				■
GROUNDWATER + SOIL	Bioremediation	■	■	■			■	■				■		■		■	■
	Multi-Phase Extraction	■		■	■	■	■	■			■						■
	Air Sparging	■		■	■				■								■
SOIL	Inertisation	■	■														
	Soil Mixing		■														
	Soil Washing	■								■							
	Collection site	■								■							
	Thermal desorption	■															
	Biopile	■											■				
	Phytoremediation		■			■											
	Soil Vapour Extraction	■		■	■		■	■	■	■							■

For more information Vademecum

PASSIVE SAMPLING ON POLYETHYLENE (LDPE) FILM

At its sites, Eni Rewind continues with the testing of the passive sampling technology using low-density polyethylene (LDPE) sheets in collaboration with Eni, Tor Vergata University of Rome, Union Energy for Mobility (UNEM), the Italian Institute for Environmental Protection and Research (ISPRA) and the National Network for Environmental Protection (SNPA). Its application allows for the assessment of both the leaching (migration) of contaminants from soil to groundwater and their volatilisation from soil to surface. Due to the adsorption properties of LDPE, pollutants accumulate on the sampler film. This allows to determine the concentration and distribution more accurately, including on the vertical profile, of organic contaminants in sediments and soils and of volatile ones in soil gas. The data provided by passive samplers can therefore be applied in the estimate of the actual mobility of contaminants, in addition to traditional characterisation techniques, so as to define the conceptual model of the site more accurately and identify better targeted environmental interventions. Therefore, it is an effective tool that is alternative and/or supplementary to traditional monitoring systems and with lower costs.
With respect to the signing of the agreement between ISPRA and UNEM, in 2024 the ISPRA booklet 30/2024 was published – application of different passive sampling systems for monitoring interstitial gases in contaminated sites – which contains the results of the tests carried out jointly with the Authorities and confirms the validity of the approach.

For more information ISPRA booklet 30/2024

SYSTEM ADVANTAGES

ENVIRONMENTAL PROTECTION
no effect on the balance of environmental matrices

AREA COVERING AND EASY INSTALLATION
a number of sampling devices can be installed quickly and easily thus covering large representative areas

SENSITIVITY
achieves results that are less sensitive to interference (e.g. humidity levels)

VERTICAL PROFILES
it is possible to verify contamination trend along the vertical at the same time

REPRESENTATIVITY/PRECISION
measures only the fraction that is actually mobile/ available in the matrix

COST EFFICIENCY
cheaper in comparison to other traditional methodologies

E-HYREC® AND E-LOREC®

In the sites where we operate, the implementation of the automatic devices e-hyrec® and e-lorec® for the selective removal of hydrocarbons from contaminated groundwater continues.

The heart of the e-hyrec® technology (Eni hydrocarbon recovery) consists of a hydrophobic filter (patented by Eni) capable of separating and extracting from the aquifer only the contaminated part (LNAPL - Light Non-Aqueous Phase Liquid; namely hydrocarbons less dense than water, which float on the surface), reducing to virtually zero the quantities of water and waste sent for disposal while significantly decreasing the time needed to remove the supernatant from the water table. In addition, thanks to an automated management and control system, the device is positioned at the level of maximum supernatant extraction.

Over the course of the past years, over 60 units were installed at national level, both at Eni and third-party customer sites, allowing for the recovery of around 1,400,000 litres of oil by 31/12/2024, and avoiding the disposal of around 5,500 tonnes of water as waste.

The e-lorec® (Eni lower-placed hydrocarbon recovery) technology involves the removal of DNAPL (Dense Non-Aqueous Phase Liquid; namely the denser hydrocarbons that accumulate in the lower layers) from groundwater. For both devices is provided the option of autonomous power supply via photovoltaic panels without connection to the grid.

Eni Rewind offers to the market an integrated rental and management service for the e-hyrec® and e-lorec® devices with environmental engineering services, environmental laboratories and project management.


e-hyrec®

e-lorec®

E-LIMINA® METHOD

The e-limina® methodology (acronym for Eni linking isotopic and microbial investigations aid natural attenuation) is a product of Eni research that combines microbiological, molecular and isotopic monitoring systems to establish the state of biodegradation of contaminants and therefore assess the applicability of in situ bioremediation technologies. The methodology applies to any matrix (aquifers or soils) both during characterisation and monitoring. In the first instance, it determines the natural attenuation effects already present, in the second it verifies, with high accuracy and in real-time, the state of biodegradation of contaminants and remediation progress. Thanks to this high-precision system, it is possible to identify the best solutions for the abatement of contamination directly in the environmental matrix, thus reducing the extraction of soil and water resources. To date, the e-limina® method has been applied at the Assemini, Avenza, Cengio, Ferrara and Priolo Gargallo sites in aquifer remediation projects involving chlorinated organic contaminants.


Ferrara - in situ remediation intervention

ENVIRONMENTAL AND ASSET DATA MANAGEMENT

At Eni Rewind, environmental and asset data are managed using the ELVIS system, a proprietary IT platform designed for the standardised collection and storage of monitoring data from environmental surveys conducted at the sites managed by Eni Rewind. The system allows the consultation, export and analysis of the information, as well as sharing it with control bodies. At the beginning of 2024, it was integrated with a Business intelligence (BI) for the analysis of hydrochemical data that will enable to automatically identify anomalous trends. The system is based on statistical methodologies and represents a valid support for specialists during data evaluation and analysis.

WASTE MANAGEMENT SOFTWARE

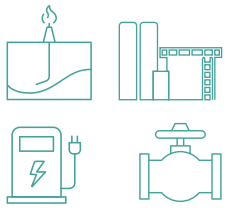
Eni Rewind's offer of complete management of the entire waste collection and disposal process is also ensured through the use of management software, ECOS and GAIA, designed to make waste management activities more efficient, optimising costs. The **GAIA Plus** digital platform, developed by Eni Rewind, represents an effective and flexible tool for business evolution and offers a series of features such as: transactional processes management with structured data entry by users; integration of workflows with other systems; generation of automatic alert emails; archiving of documents for traceability and profiling of accesses and mapping of roles in the organisation.

Eni Rewind in the Eni value chain

BUSINESS AREAS

REMEDIATION

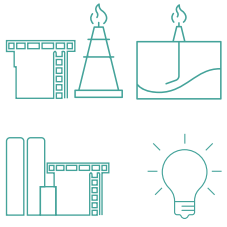
Remediation of contaminated areas to enable new opportunities for a more sustainable development



- Development and application of remediation technologies
- Management of decommissioning and soil and aquifer remediation activities:
  - at decommissioned and operational industrial sites
  - at sales outlets (service stations)
  - at contaminated areas (e.g. due to pipeline break-ins)
- Planning of remediation interventions for repurposing and future reuse of areas

WATER AND WASTE

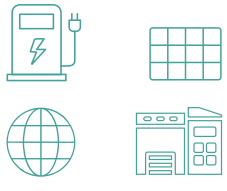
Water and waste treatment to maximise recovery and reuse



- Chemical/physical/biological treatment of groundwater, surface and production water for industrial or irrigation purposes, contributing to the reduction of water withdrawals in nature
- Management of the industrial and remediation waste cycle, from production to final disposal, maximising recovery and minimising waste
- Technology and skills development in partnership with main players

DEVELOPMENT

New business development to support the energy transition



- Realisation of new waste treatment and recovery plants in synergy with the industrial reconversion of Eni sites
- Use of remediated areas for the development, by Plenitude, of plants to produce energy from renewable sources
- Development of third party (non-captive market) interventions, leveraging on the skills gained in the field of remediation and waste management

Remediation

Remediation activities create regeneration and development opportunities for territories. For this reason, it is essential to plan the future reuse of the areas at the very early stages of the remediation process, in agreement with local institutions and stakeholders. Today, thanks to the expertise gained while managing over 150 sites with very different industrial backgrounds, Eni Rewind oversees every phase of the reclamation process, from characterisation to final certification, offering innovative solutions with a low environmental impact to maximise the effectiveness and efficiency of its interventions. The operational approach of the company is geared towards applying on-site and in-situ technologies, including Eni and Eni Rewind proprietary ones, developed within collaborations with universities and research bodies. To design, execute and manage different types of interventions, Eni Rewind leverages on its own teams of engineers, project managers and field specialists with a multidisciplinary and integrated approach for remediation projects, which includes HSE and procurement services specific to the environmental sector and an in-house stakeholder engagement and permitting structure.

750,000 hours/year of environmental engineering

35,000 hours/year of research and development

€600 Mln for remediation interventions in 2024

Cengio

At the former ACNA historical site in Cengio, which merged with EniChem in 1991 following the Enimont operation, Eni Rewind has completed the soil remediation projects, with a total expenditure of almost 500 million euros, including interventions on groundwater.

The operations included the emptying of the waterproofed basins (lagoons) in zone A1, used as accumulation tanks for saline wastewater during production activities, and the removal of approximately 1.5 million cubic meters of contaminated materials from zones A2 (former plant area), A3 (floodplain area) and A4 (Pian Rocchetta external to the site). The removed materials were then undergone safety measures in zone A1 with a surface capping, delimited along the perimeter.

Due to the proximity to the Bormida River, a 2,500 meter-long groundwater physical containment system was built, consisting of a plastic diaphragm in bentonite cement embedded in the rock (so-called marlstone) and a reinforced concrete wall, around 5 meters high. An environmental work capable of ensuring adequate safety for century-old floods (500 years) of the river, with flows of 1,750 cubic meters of water per second.

The execution of the environmental interventions, completed for the soil matrix and in the monitoring phase for the aquifer matrix, has made approximately 60 hectares of the site available for new production initiatives.

On 28 March 2025, Eni Rewind signed a preliminary contract for the transfer of the surface rights of area A1 (about 40 hectares), pending certification of remediation by the Province of Savona, and of the ownership of area A4, already certified, to the company Idroenergia of Asti which intends to build a photovoltaic plant of about 10 MWp. The agreement with a company that operates in the area with synergic activities allows for new projects to be enabled in the remediated areas, despite the non-ideal location in terms of irradiation and distance from the electricity grid. Area A2, already certified and with an industrial tradition, will be able to house a logistics-production hub, thanks to its proximity to the railway link. Hypotheses for morphological reprofiling of the area are also being evaluated, which could allow to bridge the height gap with the railway, using excavated soil and rocks from the large-scale infrastructure works planned in the Region.

Manfredonia

At the Manfredonia site, in 2006 Eni Rewind has launched an aquifer remediation system that makes use of groundwater extraction, treatment and reintroduction into the aquifer, in order to manage the karst nature of the subsoil and salt intrusion. This solution that leverages on reintroduction avoids aquifer depletion and reduces waste production.
Furthermore, the company, in collaboration with the Sapienza University of Rome, has started the application of Groundwater Circulation Wells: a closed circuit in which the extraction, treatment and reintroduction of water into the subsoil takes place at a concentration lower than that of extraction and at a different depth in the same well. Extraction and reintroduction create a circulation cell around the well that acts both vertically and horizontally, promoting contaminants mobilisation even in the fine fractions. The trend of progressive decrease in groundwater concentrations over the last four years shows the effectiveness of the technology, that will be implemented at other sites in agreement with the authorities.

Crotone

At the Crotone site, between 2019 and 2020, an Operative Remediation Project (POB) divided into two phases was approved. Phase 1, completed in September 2021, consisted in the construction of breakwaters to protect the areas undergoing future excavation activities. Phase 2 provides for the removal of two former seafront landfills and of part of the former industrial site's internal areas for a total of around 1 million tonnes of waste (non-hazardous, hazardous and with TENORM), as well as the application of in situ remediation technologies to reduce groundwater contamination. Eni Rewind has completed all the authorised preliminary activities, including pilot trials, supplementary investigations, ante operam monitoring and the construction of the preliminary temporary waste storage facility (D15). It was unable to start excavations, scheduled for 2024, due to the expected veto by the Regional Single Authorisation Provision (PAUR) on disposal in regional landfills, despite the presence in Crotone of the only Italian landfill available for hazardous waste. In August 2024, MASE issued the Decree concerning the POB Phase 2 Excerpt, enabling the disposal of hazardous waste in the Crotone landfill, while Eni Rewind has contracted 5 landfills outside Calabria for the disposal of non-hazardous waste. However, the local authorities first challenged the MASE Decree of August 2024 and subsequently warned Eni Rewind to comply with the PAUR constraint as well as the Crotone landfill from accepting waste from the remediation, effectively preventing the start of the excavation works scheduled for January 2025. In April 2025, the Extraordinary Commissioner issued an Ordinance for the immediate start of excavations with the transfer of hazardous waste to the Crotone landfill, as the only immediately available landfill, but the commissioner's ordinance was suspended by the TAR President at the request of the local authorities. In the meantime, Eni Rewind has completed the scouting of landfills abroad, as required by the MASE Decree, locating three in Sweden and one in Germany, for which the authorisation procedures for cross-border notifications are underway. In May 2025, the Swedish authorities authorised the first notification for the export via shipping of 40,000 tons of hazardous waste – equal to the expected need for the first year of activity – by May 2026, allowing the start of excavations. However, this option can only be complementary to the use of the Crotone landfill, taking into account the logistical complexity of the deliveries abroad that could cause construction site shutdowns as well as the risk that the notifications will not be renewed starting from May 2026, also due to the application of EU Regulation 2024/1157.

Brindisi

At the multi-company site in Brindisi, Eni Rewind manages the environmental remediation of the areas inside and outside the petrochemical plant, both on its own behalf (on the owned areas) and on behalf of the co-located companies. In 2024, the Province certified the permanent safety measure interventions (MISP) on the soil of the Micorosa area, carried out in collaboration with local authorities as part of a public-private agreement with the Municipality of Brindisi and the Puglia Region for the coordinated execution of activities in the areas outside the plant. At the same time, the remediation of the 'Protected Oasis' area was completed, with the removal and disposal of approximately 28,000 m^3 of anthropogenic material, which made it possible to redevelop a natural habitat for migratory birds and Mediterranean flora. Soil remediation inside the plant is divided into three distinct environmental procedures: the first, already approved, is in the excavation and disposal phase, while the other two, in the design phase, include solutions such as excavation, capping and High Vacuum Extraction (HVE), a technology that extracts vapours from unsaturated soil for its subsequent treatment. For groundwater remediation, a hydraulic barrier system with 76 wells is active, which sends the pumped water to the treatment plant, recovering approximately 50% of the treated water for reuse in industrial processes, therefore minimising the withdrawal of natural water resources. The project also includes the installation of **Multi Phase Extraction (MPE)** modules and other bioremediation technologies to accelerate groundwater remediation.

Pieve Vergonte

At the Pieve Vergonte site, Eni Rewind is carrying out environmental interventions aimed at the matrices, and also designed to minimise the movement of the soil undergoing remediation. The approved soil remediation project includes a circular and sustainable solution: compliant soil will be used for backfilling, reducing the use of virgin soil, while unsuitable soil will be confined to a plant isolated from the external environment, developed in subsequent lots and which will be restored to greenery with native plants.
In 2025, after obtaining the Variation Decree in September 2024 for the 2020 operative remediation project, Eni Rewind started a construction site for the diversion of the Marmazza river, which concerned a stretch over 1 km long and has overcome the interference with the Sempione highway and the Gottardo railway.
The intervention will allow subsequent soil remediation activities to be carried out in hydraulic safety, while preserving the underground water resource.
For the treatment of groundwater, a hydraulic barrier is active with approximately 60 pumping wells, which send the water to a groundwater treatment plant (GTP) among the largest in Europe, capable of managing up to 6 billion liters per year. In addition, in situ remediation interventions are underway on the main contamination nuclei, **Air Sparging (AS)** and **Soil Vapor Extraction (SVE)** technologies.

DECOMMISSIONING

In many cases, the environmental requalification process of an area requires decommissioning intervention on production facilities, already in disuse or at end-of-life, with the remediation of circuits and plant equipment, the demolition of structures and the management of the resulting waste. These interventions are of great importance, both due to their complexity in terms of management and engineering, and because they are preparatory to area recovery and regeneration projects. In this regard, Eni Rewind possesses unique know-how, technical skills and knowledge gained in the field at various sites, as well as dedicated design and execution teams. The company, committed to reducing environmental footprint, ensures the recovery and reuse of materials from demolition activities: in 2024, approximately 8,000 tonnes of scrap metal, mainly iron and steel, were sent for recovery in order to find a second life in the civil and industrial sectors.

Gela - decommissioning of former Agricoltura Island 6 warehouses

Gela: decommissioning of disused plants of traditional refining

At the Gela site, Eni Rewind, within the Memorandum of Understanding signed in 2019 by Eni and the Ministry of Environment, is carrying out the decommissioning project for the disused plants formerly part of the traditional refining process.
After completing the dismantling of the Snox chimney, several thermal units, drill structures, and the old torch, the operations for the decomissioning of the four-stack chimney, the Snox plant, the Small Pier and the removal of disused Pier's lines are currently underway.
For these interventions, top-down disassembly was necessary to avoid any interference with other plant operations and to maximise the future reuse of materials. The completion of this ambitious decommissioning plan, complex and articulated, is expected by 2029.

RAVENNA

The Ponticelle project in Ravenna is a concrete example of productive redevelopment of a disused industrial site. On the area, which has undergone environmental interventions for permanent safety measures, certified in 2021, the construction sites for the HEA (joint venture between Eni Rewind and Herambiente) multifunctional platform for the pre-treatment of industrial waste, and the Eni Rewind platform for the biorecovery of soils from remediation are underway. In addition, Plenitude's photovoltaic plant was completed in February 2024. The initiative shows that the synergy with institutions and the businesses operating locally can turn remediation into an added value for the territory, both in terms of growth and development. The project also includes urbanisation, renaturalisation and valorisation works on an area of public value in the Classe pine forest ('Ca' Giansanti').

Ravenna Ponticelle - platforms realisation

The plants included in the Ponticelle project

Photovoltaic plant
With an installed capacity of 6 MW, Plenitude's plant, completed in February 2024, covers an area of 11 hectares and is made up of over 10,000 last-generation photovoltaic panels in monocrystalline silicon. The panels are mounted on special structures equipped with a solar tracking system, which are fixed on ballasts placed over the waterproof capping of the permanent safety measures interventions. The energy storage system will use a new generation of batteries, the so-called flow batteries, which will allow to experiment with innovative solutions. When fully operational, the photovoltaic plant is able to produce the energy equivalent to the needs of over 3,000 families.

Soil Biorecovery Platform
Eni Rewind's plant, with a treatment capacity of 80,000 tonnes per year, will be dedicated to the aerobic biodegradation of hydrocarbon-contaminated soils, primarily originating from the remediation of service stations, using indigenous microorganisms (fungi and bacteria). The aim is to reuse the soils post-treatment in other service stations undergoing reclamation activities, reducing landfill disposal and the use of virgin resources. The platform, which will cover 3 hectares, also includes a bio-laboratory capable of conducting preventive analytical checks on the conformity of the waste entering the plant and periodic monitoring surveys of bioremediation processes.

Multifunctional platform for the management of industrial waste
The plant, which will be developed by HEA, aims to actively contribute to the structural gap in Italy and to the special waste management in Emilia Romagna, minimising disposal while favouring energy and material recovery from the collected industrial waste. The plant, which will replace the current HASI (Herambiente Servizi Industriali) platform, will manage up to 60,000 tonnes per year of special waste from environmental and production activities, prioritising those operating locally and in the nearby areas, in line with the European directives of the Circular Economy Package.

REMEDIATION AND VALORISATION OF AREAS

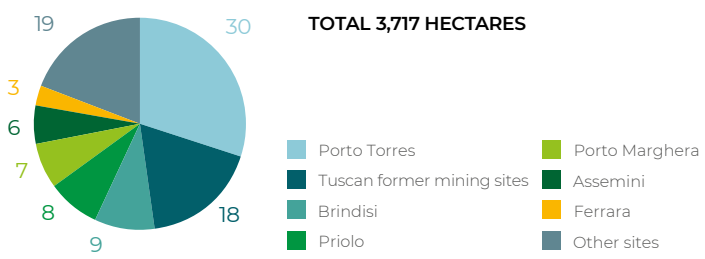
Soil is a limited resource as it is not reproducible. Disused industrial sites are as critical environmentally as they are economically, if not reused. For this reason, Eni Rewind is committed to give a new lease of life to the sites where it operates through remediation projects designed with productive redevelopment in mind. The company's own areas are located in highly anthropised and serviced industrial districts that, once remediated, lend themselves to new development initiatives, avoiding the consumption of new land. An example of this are plants for the production of energy from renewable sources or those for the treatment and recycling of waste.


Avenza

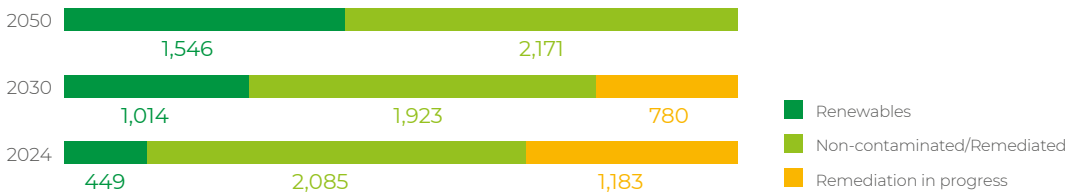
~68% proprietary areas available for new projects in 2024

~80% areas available for new development initiatives by 2030

TOTAL ENI REWIND AREAS (%)



STATE OF LAND OWNED BY ENI REWIND (HECTARES)

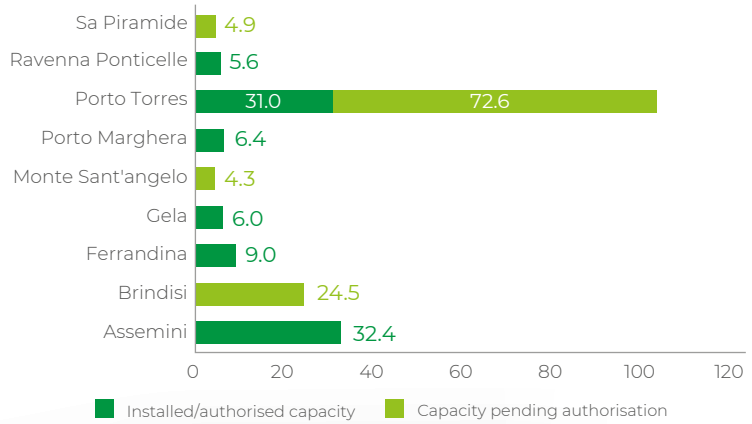


ENI REWIND'S CONTRIBUTION TO RENEWABLES

The development of renewable energy is an integral part of Eni's strategy of progressive decarbonisation. Leveraging on the consolidated partnership with Plenitude, Eni Rewind's proprietary areas, after soil remediation in case of contamination, are used to build renewable electricity production plants. The energy produced is used to meet the needs of the co-located companies' industrial assets, and the remaining part is fed into the grid. Within this context, the photovoltaic plants installed at the Assemini, Porto Torres, Gela, Porto Marghera and Ravenna Eni Rewind's sites were realised over 122 hectares and have an installed capacity of 72 MW. Furthermore, BESS (battery energy storage systems) plants at the Porto Marghera, Gela, Assemini and Monte Sant'Angelo sites, photovoltaic plants at the Monte Sant'Angelo, Brindisi, Porto Torres and Portoscuso sites and a wind farm in Porto Torres are currently undergoing the design process.

Development will continue in the coming years having identified over 1,500 hectares of Eni Rewind areas which, once the remediation activities are completed, can potentially be used for the installation of photovoltaic and wind plants, with a potential installable capacity estimated at around 900 MW.

RENEWABLE PLANTS (MW)



~72 MW total installed photovoltaic capacity as of 2024 on **~122** ha

~19 MW total authorised capacity in 2024 on **~24** ha

107 MW total capacity pending authorisation on **~287** ha


Assemini - photovoltaic plant

Water Management

42 water treatment plants

1,400 extraction wells

>5,200 monitoring wells

>36 Mln m³ treated water, of which 27 mln returned to the environment

~9 Mln m³ water reused for industrial and environmental purposes

Eni Rewind carries out aquifer remediation across the country. The company implements an integrated system consisting of hydraulic barriers, which prevent contaminants from migrating off-site, and groundwater treatment plants (GTP); in addition, it uses state-of-the-art techniques to remove the source of contamination.

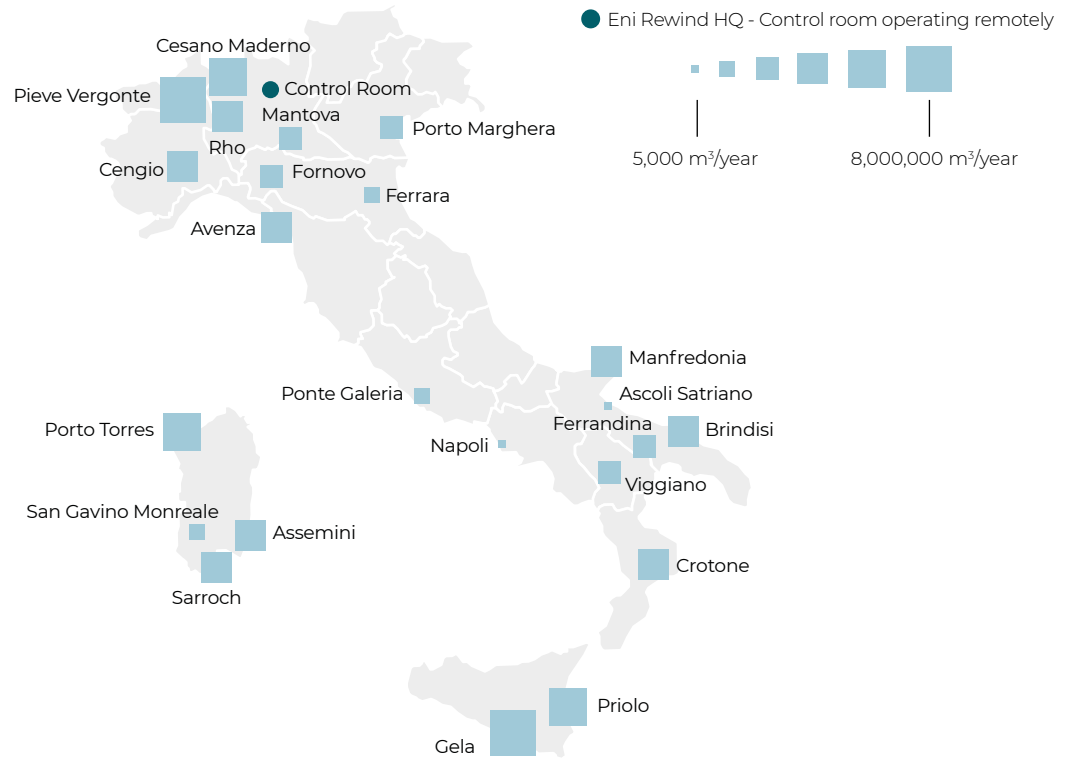
At each site, Eni Rewind implements dedicated solutions, starting with the study of aquifer geology through three-dimensional modelling by a team of in-house specialists. This approach is based on numerical models to interpret, represent and predict groundwater flow to identify the most appropriate remediation techniques and optimise the barriers flow rates to be sent to groundwater treatment plants (GTP). This results in greater effectiveness in removing contaminants and protecting the water table, even from natural phenomena such as salt intrusion, typical of coastal areas.

The tools for the automation, remotisation and dynamic control of the treatment plants ensure and optimise the reliability of the processes of the entire supply chain, while simultaneously maximising the recovery of reusable water within the sites. In 2024, the company treated over 36 million cubic metres of water through the 42 plants managed, reusing approximately 9 million for industrial purposes within sites and for environmental uses, like reinjection into the aquifer or for the safeguarding of surface water bodies.

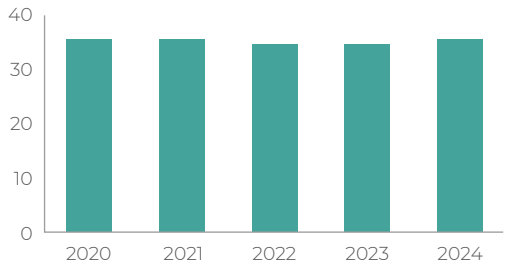
Among the plants managed by Eni Rewind are included those for the treatment of industrial (in Manfredonia and Gela) and municipal (in Gela and until 2024 also in Cengio) wastewater.

Porto Torres - GTP plants 5 and 6

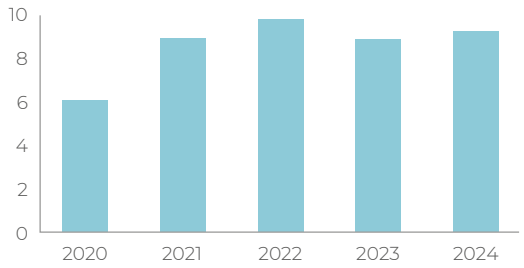
WATER TREATMENT SYSTEMS (2024 VOLUMES)



TREATED WATER (Mm³/y)



REUSED WATER (Mm³/y)



At the Priolo, Gela, Porto Torres and Brindisi sites, the search for more sustainable and efficient solutions for the management of water resources has led to the realisation of dedicated sections in the groundwater treatment plants (GTP) for the production of demineralised water for industrial purposes on site. In other cases, for example in Manfredonia, the treated water is reinjected into the aquifer to restore its natural conditions and simultaneously avoid the risk of salt wedge intrusion.

ASSET INTEGRITY AND PROCESS OPTIMISATION

All groundwater treatment plants are automated and digitalised to effectively oversee process reliability and safety, work quality and business sustainability. The company remotely monitors assets at operating sites through a 24-hour control room based in San Donato Milanese. This allows to operate using standardised operating models for efficient asset management that reduces risks and maximises operational performance. Eni Rewind also promotes research in new technical solutions and continuous plant renewal to optimise water treatment processes while reducing resource consumption. A case in point is the Priolo site, where a pressure recuperator was installed in the reverse osmosis section of the groundwater treatment plant (GTP). This device allows energy to be recovered in the form of pressure from the liquid current exiting the reverse osmosis section, used to pre-pressurise the flow entering the GTP. The adoption of this system allows the GTP to operate in optimised conditions, reducing energy consumption and therefore also environmental impact. In 2024, with a view to continuous improvement and optimisation, a new section for the abatement of solids not dissolved in water was added to the Porto Marghera plant, with the aim of reducing chemical products consumption compared to traditional treatment systems.

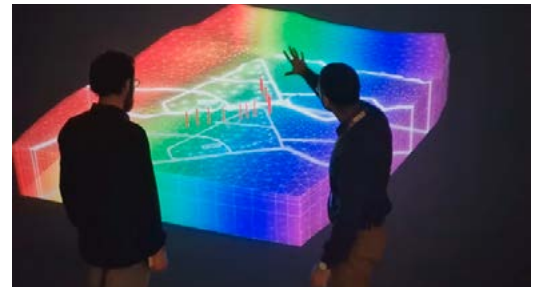
HYDROGEOLOGIC MODELLING

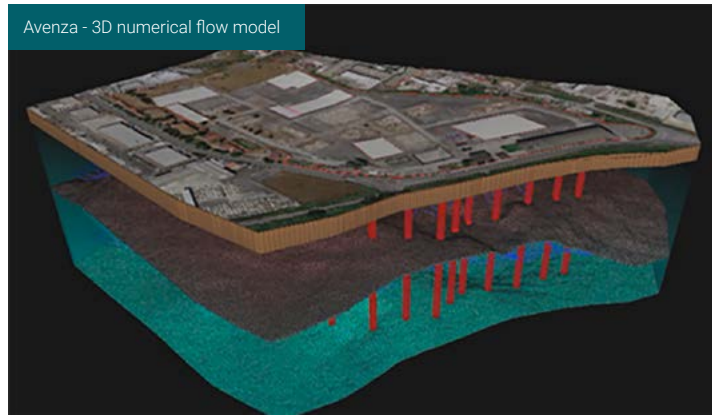
Eni Rewind uses 3D hydrogeological modelling to dynamically design, build, manage and optimise groundwater hydraulic barrier systems, Pump and Treat (P&T).

Through the analysis of the site-specific characteristics of the area to be delimitated (geology, groundwater flow rate, seasonality) and customised in-house software, it is possible to produce a conceptual site model that provides the best picture of the aquifer undergoing treatment.

Thanks to this approach, integrated with online numerical and sensor modelling, it is possible to identify, for each barrier well, the flow rate necessary to guarantee the hydraulic containment of the site, based on the trend of the piezometric and hydrometric conditions actually detected.

In this way it is possible to improve the environmental sustainability of the hydraulic barriers, reducing the volumes pumped, lowering treatment and lifting costs, prolonging the life of the barrier wells and decreasing the frequency of ordinary maintenance interventions. This approach has been successfully applied at several sites with significant reductions in water withdrawals, while still ensuring effective containment.



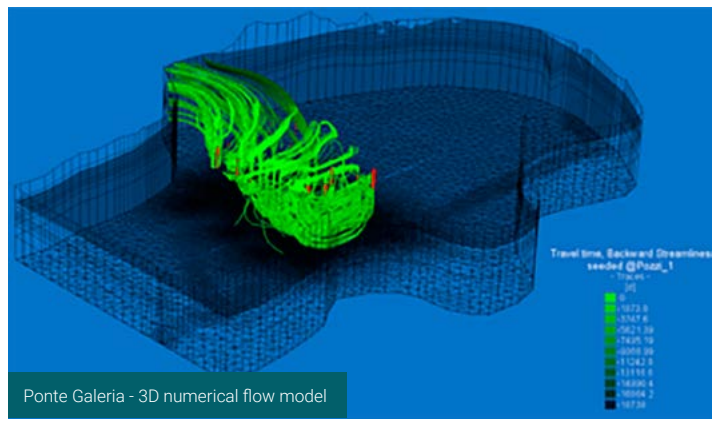


Avenza - 3D numerical flow model

Avenza

650,000 m^3
reduction in water withdrawals from July 2022 to December 2024

-19% compared to constant flow rate management



Ponte Galeria - 3D numerical flow model

Ponte Galeria

170,000 m^3
reduction in water withdrawals from July 2022 to December 2024

-51% compared to constant flow rate management

Waste Management

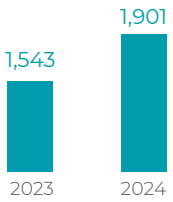
Eni Rewind, as Eni's global contractor, manages the whole waste cycle resulting from the remediation activities and decommissioning of disused structures, as well as from the Group's industrial activities. The daily control of the supply chain includes waste characterisation, the selection of the industry best recovery and disposal options, as well as the adoption of logistic programming systems – through dedicated softwares – that ensure optimisation in terms of costs and improvement on environmental impact. The running of operations is guaranteed through a selected and qualified network of over 90 plants, specialised by waste type, and an internal team of over 110 skilled professionals that oversee the traceability system and regulatory compliance. In 2024 Eni Rewind managed an overall of around 1.9 million tonnes of special waste, of which around 80% for the necessities of other Eni groups. The managed waste results for around 70% from industrial processes (in particular liquid waste produced as part of extractive activities and from permanent safety measures, approximately 58% of the total), and for 30% from remediation activities and demolitions (in particular soil and rocks). The increase in the volume of waste managed in one year is mainly due to the permanent safety measures activities in the Sannazzaro Refinery and to the construction site for the conversion of the Livorno Refinery into a biorefinery. The recovery index, which is the ratio between recovered and recoverable waste, stood at around 76%, in line with the percentages recorded in previous years.

1.9 Mln tonnes of waste managed

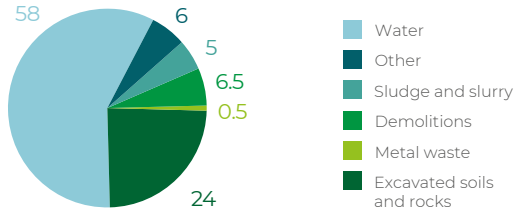
76% of recovered vs. recoverable waste

27% of hazardous waste vs. total waste managed

WASTE MANAGED (Kton)



TYPE OF WASTE MANAGED IN 2024 (%)



RECOVERED WASTE

RECOVERED WASTE			MACRO-TYPE OF RECOVERED WASTE			
2022	2023	**2024**	Demolition waste	Metal waste	Excavated soils and rocks	Sludge
74%	75%	**76%**	91%	100%	78%	84%

Brindisi - temporary deposit for the waste deriving from the Protected Oasis remediation

MAIN NEW PLANTS

Eni Rewind is committed to realising new waste treatment and recovery plants in proprietary areas which have already undergone remediation, also by leveraging on cooperation agreements with leading Italian companies in the sector. In a market characterised by infrastructural supply shortages, the construction of new facilities will optimise waste management in terms of service continuity and service, logistical costs, as well as environmental and economic impacts.

PORTO TORRES

Platform treating soil through bioremediation, soil washing, thermal desorption and inertisation. Launched in 2021 as a zero km remediation project of the former Minciaredda landfill, the platform is equipped with cutting-edge technologies which, subject to authorisation, can also be valorised at the end of the remediation as a solution for other waste management requirements in Sardinia.

PORTO MARGHERA

Treatment plant for municipal sludge deriving from civil wastewater treatment. The plant will enable the processing of up to 190,000 tonnes per year of urban sludge and will be located in a remediated area owned by Eni Rewind in Porto Marghera. **Start-up expected in 2028**.

RAVENNA

In a reclaimed area owned by Eni Rewind, the construction of two plants is underway: a bioremediation platform for hydrocarbon contaminated soil and an industrial waste pre-treatment plant in partnership with Herambiente. **Start-up expected in 2026.**

VIGGIANO

Viggiano Blue Water is a plant that deploys Eni Rewind's technology for the treatment and recovery of water associated with the production of hydrocarbons (400,000 m^3/y). This solution enables the reuse of the resource as demineralised water in the industrial cycles of the Viggiano production site, reducing freshwater withdrawals. **Start-up expected in 2028**.

Waste management · Soil management · Water management

Methodological Note

The Eni Rewind for 2024 Sustainability Report and the data reported therein are part of Eni's sustainability reporting, which includes the **Consolidated sustainability Reporting** (subject to limited review by the appointed independent company) and the **Sustainability Report Eni for 2024**.
Unless otherwise specified, performance indicator data refer to the financial year ending 31st December 2024. Some data from the previous two/four years are also given for comparison purposes. The activities and projects included in the document are reported, where relevant, up to the end of the first half of the year of publication to provide the reader with the most up-to-date information possible.
The reporting system is completed by the information provided on the Eni and Eni Rewind websites, to which reference should be made for more in-depth information on the topics covered in this report.
Please consult the **online glossary** for a guide explaining simply and succinctly the terminology, concepts and acronyms in the Eni Rewind for 2024 Report.


Sa Canna site

Eni Rewind SpA

Registered Office
Piazza Boldrini, 1
20097 San Donato Milanese (MI) - Italy

Joint Stock Company
Share Capital: €101,755,495.30 fully paid
Tax payer code: 09702540155
Business Register of Milano-Monza-Brianza-Lodi
R.E.A. (Economic Administrative Index) Milano n. 1309478
Company subject to the management and coordination of Eni SpA

Contacts
Website: www.enirewind.com
LinkedIn: www.linkedin.com/company/enirewind
Switchboard: +39-025201

Layout and supervision
K-Change - Rome


eni rewind
remediation & waste into development