

products,
services,
solutions

FOR SUSTAINABILITY







products, services, solutions

FOR SUSTAINABILITY

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WHAT WE OFFER?



PRODUCTS

-  SAF
-  HVO
-  BIOMETHANE
-  HYDROGEN
-  INVIX
-  SUNPOWER
-  VERSALIS REVIVE
-  BALANCE
-  XL EXTRALIGHT




SERVICES

-  ENJOY
-  E-MOBILITY
-  ENERGY EFFICIENCY
-  WHITE CERTIFICATES
-  ENI PARKING
-  ENI CAFE'
-  EMPORIUM
-  MULTICARD
-  DIGITAL VOUCHERS



SOLUTIONS

-  AGRI-FEEDSTOCK
-  POWER
-  CARBON CAPTURE, UTILIZATION, STORAGE
-  REMEDIATION, WATER & WASTE MANAGEMENT
-  CARBON OFFSET
-  CIRCULAR ECONOMY
-  FUSION POWER
-  WAVE POWER

OUR TARGET MARKET?



Heavy industries (metallurgical, iron and steel, manufacturing, steel works, cement plants)



Airports, airport companies



Port and interport companies



Air transport



Rail transport



Textile industry



Building industry



Distributors of oil products



Shipping companies



Logistics (land and sea)



Retail (catering and mass retailing)



Construction companies (OEM'S)



National civil bodies



Public and regional authorities



Municipally owned companies



Telecommunications, software and data centre companies



Agricultural companies and farmers



Pharmaceutical companies



Banking and financial institutions



Luxury and cosmetics



Food & beverage



A holistic approach to decarbonisation

The main challenge facing the global energy market is to ensure universal access to energy and tackle climate change by accelerating the transition process.

ENI SETS SIGHTS ON ENERGY TRANSITION LEADERSHIP.

Eni has set up **Sustainable B2B** to contribute to the decarbonisation of all sectors through a holistic and transversal approach of technologies, experience, research and development and a network of collaborations that feed a virtuous ecosystem, **starting from the partners' needs and building ad hoc solutions**. Eni's portfolio includes, among others, new fuels and products of **bio-genic origin**, obtained from waste and refuse or from vegetable raw materials not in competition with the



food chain, the supply of electricity produced from renewable sources, as well as solutions for sustainable remediation and for water management and territorial regeneration from a circular economy viewpoint. Eni is developing breakthrough technologies such as CO₂ capture (CCUS) and magnetic confinement nuclear fusion, as well as new alternative energy carriers such as hydrogen. Sustainability is at the heart of Eni's objectives, with products and services focused on people and vehicles aimed at making an increasingly solid contribution to decarbonisation.

Stakeholders appreciate Eni's new business model as it is an integrated system comprising specific and complementary solutions, some immediately available and others the result of a continuous drive to achieve te-

chnological innovation. The development of a vertical integration model along the value chain, which - as in the case of agri-feedstock production in Africa - allows long-term partnerships to be built with local communities, ensuring the protection of biodiversity. Together with the communities and its partners, Eni is accelerating decarbonisation processes by aiming to enhance local vocations and social and economic wellbeing, with a view to **Just Transition**.

**TOGETHER
FOR TRANSITION TO BUILD
A MORE SUSTAINABLE FUTURE.**



SAF



SAF Sustainable Aviation Fuel

This is a fuel from renewable raw materials - mainly **Waste&Residue** - that can be blended with conventional Jet A1.

It is a drop-in product and meets the specification of 'conventional' Jet A1.

It therefore does not require any technical modifications to the aircraft, infrastructure and vehicles used for refuelling.

The **SAF (Sustainable Aviation Fuels)** produced by Eni come exclusively from waste and residues, in compliance with the ban on the use of palm oil as from 2023. The feedstocks used by Eni are waste animal fats and used vegetable oils.

The bio component contained in the finished blended fuel allows a reduction in greenhouse gas emissions, over the entire life cycle, of up to 90%

compared to the fossil equivalent, according to the **Renewable Energy Directive II**. With the SAF it produces itself, **Eni** contributes significantly to the decarbonisation of aviation.

Regulatory framework

Use of **SAF (Sustainable Aviation Fuels)** is already mandatory - at 1% - in countries such as France and Scandinavia. The proposed European regulation foresees a 2% constraint until 2025 (fit for 55), but the market is already pushing airlines towards voluntary use.

Benefits for companies

SAF - Sustainable Aviation Fuel allows GHG emissions to be reduced in proportion to the share of the component used without any technical modifications to aircraft. Its use enables airlines to meet their ETS (emissions trading scheme) targets and voluntary adoption enables airlines to meet their decarbonisation goals.



Eni strategy

Eni is already marketing the JET A1+Eni SAF (i.e. the fuel containing a bio component made through co-processing technology) produced at the Taranto refinery.

SAF - Sustainable Aviation Fuel is obtained through the co-feeding process, co-feeding conventional plants with UCO quotas.

In 2022, production at the Livorno refinery will become fully operational by distilling the bio-components produced in the Gela biorefinery thanks to the proprietary Ecofining™ technology.

This product, known as **Eni Biojet**, will contain **100% biogenic component** and can be used in blends with conventional jet up to **50%**.

Growth will continue from 2024 with launch of the production of **Eni Biojet at Gela**, where a project is already underway that will allow an additional **150,000 tonnes/year** from renewable raw materials to be placed on the market, capable of satisfying the potential obligation of the Italian market for 2025.

Projects abroad

At the same time, as part of a number of Eni projects launched in Africa (Kenya), a **Waste&Residue** collection chain is being developed, mainly involving UCO (used cooking oil) and animal fats. The business model envisages direct collection and the use of local operators active in collection from Ho.Re.Ca. (Hospitality, Restaurant, Catering) and large companies. Initiatives are being evaluated to involve public administrations and school systems in order to define collection points for use of household waste.





HVO Hydrotreated Vegetable Oil

The contribution towards the decarbonisation of the transport sector by 2050.

A new generation of fuels

Eni's HVO hydrotreated biofuels are mainly produced from raw materials that do not compete directly with food and fodder crops, such as agricultural residues and waste.

Based on the standard criterion of Directive (EU) 2018/2001 (RED II), when used pure, CO_{2eq} emission savings from HVOlution biofuel along the entire logistics/production pathway during 2022 were between 60% and 90% relative to the fossil fuel comparator (i.e. 94 g CO_{2eq}/MJ), depending on the feedstock used for its production*.

Biorefineries, Eni's contribution to the circular economy

With the development of proprietary technologies Eni has reconverted two traditional refineries - Venice and Gela - to the processing of raw materials of biological origin - vegetable oils, but also animal fats and used cooking oils or extracts from algae - with an increasing use of waste and residue feedstocks.

Eni's biorefineries from 2023, in compliance with regulatory obligations, no longer process palm oil, but instead mainly seeds from crops that are not in competition with the food chain and waste raw materials, diverting them from disposal, as an example of circular economy, even at 0 km.



Product pluses

- It has a calorific value similar to fossil diesel and higher than traditional **biodiesel**.
- It has a **high cetane number** (min. 75), which allows excellent combustion, especially in cold starts, and reduces engine noise.
- It is **free of aromatics and polyaromatics**, the compounds with the greatest impact on the environment.
- It **can be used in purity on all type-approved conventional diesel engines** without fleet adaptation costs.
- It consists of a **stable paraffin** blend that is non-hygroscopic and therefore not subject to bacterial contamination.
- It is **already available**, requires no investment along the logistics chain as delivered just like a conventional fuel and, pursuant to EN 15940, can be used, including pure, in all type-approved engines (XTL).

Ecofining™, the technological heart

Ecofining™ technology, patented by Eni in collaboration with Honeywell-UOP, enables HVO to be obtained through a process of hydrodeoxygenation and isomerisation. This process generates high-quality biofuels compared to conventional ones in terms of energy content, impurities and chemical stability.

Projects abroad

Eni is engaged in projects to promote feedstock production from agriculture for biorefining (so-called agrifuel) that will feed the production chain and secure feedstock supply, while reducing cost volatility.

agri-feedstock

In July 2022, Eni completed construction of the oil-seed harvesting and pressing plant (agri-hub) at Makueni, Kenya, and started production of the **first vegetable oil for biorefineries**. This is to be followed by the construction of a second plant to reach a total capacity of 30,000 tonnes of vegetable oil per year in 2023 and the development of associated agricultural supply chains.

This is the first integrated project to include Africa in the vertical biorefining supply chain that embodies all the keystones of Eni's approach towards **greater sustainability**, in which Eni has distinguished itself for its speed and operational excellence (one year from the agreement with the Kenyan government and six months from the start of construction) and for its **commitment to social development** (25,000 farmers and up to 200 people per day in the construction of the centre).

The agri-hubs will initially process **castor**, croton and cotton seeds to extract vegetable oil: more sustainable raw materials, **agri-feedstocks** that are not in compe-

tition with the food chain because they come from crops that are resistant to dry conditions and suitable for growing on degraded land or obtained through the recovery of waste and refuse from agro-industrial chains, with a view to a circular economy.

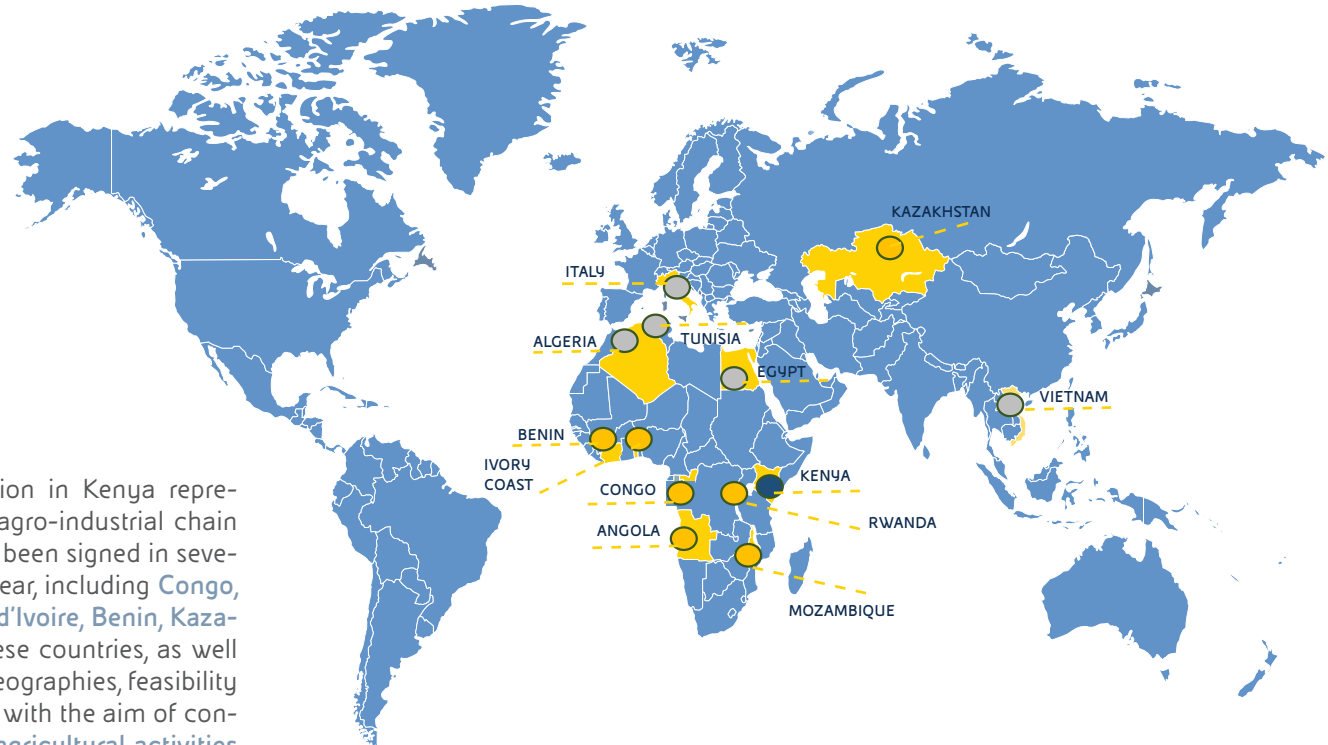
The project aims at facilitating market access for farmers, through the construction of oilseed processing factories, guaranteeing them access to land, through initiatives that do not negatively impact food production but instead foster socio-economic development, also through the production of feedstuffs and bio-fertilisers in favour of food safety.

The supply chain and all the agri-feedstocks developed in the **Eni Kenya project have been certified according to the ISCC-EU** (International Sustainability and Carbon Certification) sustainability scheme and, within the Horizon 2020 project, in partnership with ISCC, actions have been initiated to obtain Low ILUC certification (low risk of direct and indirect soil change, negative impact on food production and forests).



PORTAFOGLIO OF INITIATIVES

- UNDERGOING EVALUATION
- PRE-FEASIBILITY/FEASIBILITY
- FIRST PRODUCTION



Start-up of bio-oil production in Kenya represents the first step in **Eni's** agro-industrial chain initiatives. Agreements have been signed in several countries over the past year, including **Congo, Mozambique, Angola, Côte d'Ivoire, Benin, Kazakhstan and Rwanda**. For these countries, as well as for Italy and other new geographies, feasibility studies have been launched with the aim of conducting an initial phase of **agricultural activities** in the more mature countries starting in 2022 and then proceeding with the construction of seed-pressing plants for biorefining.

Biomethane

Among alternative fuels with a low environmental impact, methane is the most technologically mature and consolidated on the market, boasting a distribution network of around 1,500 points of sale in Italy. Biomethane, which can be obtained from the organic fraction of urban waste or from agricultural and agro-food waste, is able to further reduce CO₂ emissions compared to fossil methane, taking into account the entire life cycle of the product.

Eni, as of the second half of 2021, is already only distributing biomethane on its own network - **around 110 own sales outlets**.

Today, **Eni** acquires biomethane from the GSE or through bilateral agreements with producers. Soon, however, it will be self-produced in **21 new proprietary plants**.

Eni also already owns a network of **15 sales outlets** that supply liquid methane (LNG).

Over the next four years, a further **25 new liquid methane** sales points are planned to cover the main roads most travelled by heavy transport vehicles. The gradual replacement of fossil **LNG with bio LNG** also started in the first half of 2022.





hydrogen

Eni is the largest producer and user of hydrogen in Italy and sees this carrier as a fundamental lever for the decarbonisation process.

Hydrogen is to play a pivotal role in the decarbonisation of industrial sectors that already use it in their own processes, such as chemicals and refining, and in those that are difficult to electrify, so-called hard-to-abate (e.g. steel mills, paper mills, ceramics, paper and glass production).

We are engaged in the development and implementation of hydrogen production processes:

- from steam reforming of natural gas in combination with CO₂ emissions capture – “**blue**” hydrogen;
- from electrolysis powered by renewable energy – “**green**” hydrogen;
- from **gasification of non-recyclable** waste according to a circular economy approach.

We are involved in the research and development of new hydrogen technologies (such as methane pyrolysis) and we promote the creation of a hydrogen ecosystem through international partnerships and membership of the **European Clean Hydrogen Alliance** and **Hydrogen Europe**.

The goal is to become a leader in the supply chain of **low-carbon hydrogen** and that from renewable sources by investing in projects:

- with **international partners**;
- for **self-consumption and industrial uses**;
- for **transport and mobility**: Eni is working on the construction of a network of hydrogen fuelling stations. The first station was opened in Mestre (Venice) in 2022; the second is planned for San Donato (Milan) in 2024;
- in **synergy** with the **CCUS - Carbon Capture, Utilisation, Storage** - and **RES - renewable energy** sources and magnetic fusion activities.



Carbon Capture Utilization Storage

Carbon capture and storage (CCS) of carbon dioxide is a process recognised as safe and technically mature because it is based on known and commercially available capture technologies and because it exploits the experience gained in natural gas storage for over a century. Since the 1960s, Italy has been using depleted gas fields to store strategic gas reserves with a total of 14 active sites and an operating capacity of over 14 billion m³, without any major accidents ever occurring (source: Mise). There are currently 27 active CCS projects worldwide, some for decades such as Snøhvit (2008) and Sleipner (1996) in Norway, and no CO₂ leaks have ever occurred. More than 100 new projects are under development.

In the energy transition, CCS - Carbon Capture and Storage is crucial for reducing process emissions from the most energy-hungry, so-called hard-to-abate industrial sectors, for which energy efficiency and renewable sources are not sufficient and for which, to date and in the medium term, there are no alternative solutions to CCUS that are as technically and economically effective.

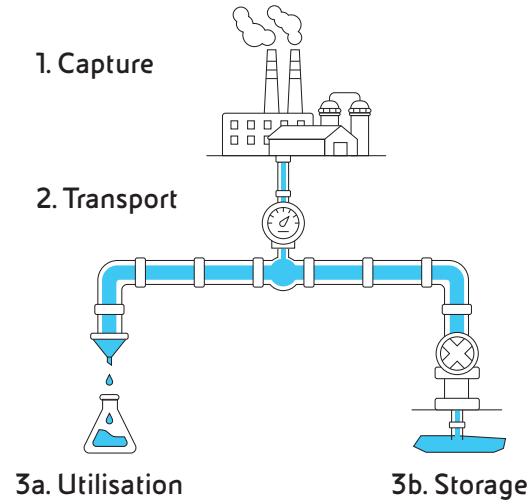
Eni's CCS - Carbon Capture and Storage projects are developed for the purely environmental purpose of contributing to decarbonisation through the permanent storage of CO₂ and the production of Blue Hydrogen.



How CCUS works (Carbon Capture, Utilization and Storage)

This is a process that enables the reduction of carbon dioxide emissions into the atmosphere through the capture of CO₂ and subsequent:

- **reuse of the CO₂** in commercial products (CCU - Carbon Capture and Utilisation);
- **storage of CO₂** (CCS - Carbon Capture and Storage).



CCS: a mature and flourishing sector

The first CCS plants have been in operation since the 1970s and new projects are planned around the world in the coming years.

1971 Terrell, Texas
world's first CCS plant

1996 Sleipner, Norway
First CCS plant for emission reduction only

20 Mton
CO₂ stored by Sleipner project from 1996 to present

27 plants
Industrial-scale CCS projects operational today

40 Mton
Global CO₂ emissions avoided annually by CCS

>100 initiatives
new capture and/or storage projects in development

eni parking

Eni Parking makes available more than 500 car parking spaces equipped with smart parking services in the active **Live Stations** and in the redeveloped and upgraded Eni sites.

To date, 31 parking spaces have already been created, 18 gated and 13 single stall.

In fully digital mode, by paying only by credit and debit card, access is gained to the parking

terminals or directly with the **Eni Live app** which allows selection, unlocking and payment directly on your smartphone.

For **Enjoy** customers, when using car sharing, there is an integrated rate offering a **50% discount** on parking when combined with a daily rental with communication on the **Eni Live app and on the site**.

eni café

Eni Café is the food-format inside Eni Station

Eni Café is Eni's own brand of coffee shop/store first seen in Italy in 2002. With more than 600 outlets, it is currently the country's largest coffee shop chain and the 5th largest food sector operator with 40 million cups of coffee served. Leading Italian brands are utilised to ensure it offers products of the highest quality. It is a service that was started in our Eni Live Stations to offer motorists breakfast and lunch whilst stopping off for fuel, but is now established outside of filling stations

as well. With a new look design inspired by the great international bistros, Eni Café has made its first appearance outside the road network at the Terminal Vaticano Roma mobility hub. Located in an important strategic and central point for tourism, it will offer an entirely Italian break of the highest quality aimed at a certain type of national, but above all international, clientele. It is the first step in an expansion strategy designed to place our brand in many other prestigious locations.

emporium

A proximity shop inside the **Eni Café**, created to fulfil consumers' fresh requirements.

It provides its customers with a convenient, fast and safe shopping experience.

It offers quality products selected from the most important names in the food sector which complement the cafeteria and restaurant offering of **Eni Café**.

multicard



Multicard is Eni's payment system specially designed for our business customers whilst on the move.

All Multicards can be used through the App, but a solely digital version may also be requested. Besides fuel, **Multicard** also allows you to purchase oil, accessories and forecourt services, as well as wash or recharge your vehicle, and offers on **Plenitude**, **BeCharge** and **Eni** charging points, at enabled **Eni Live Stations** and the charging network spread around the country.

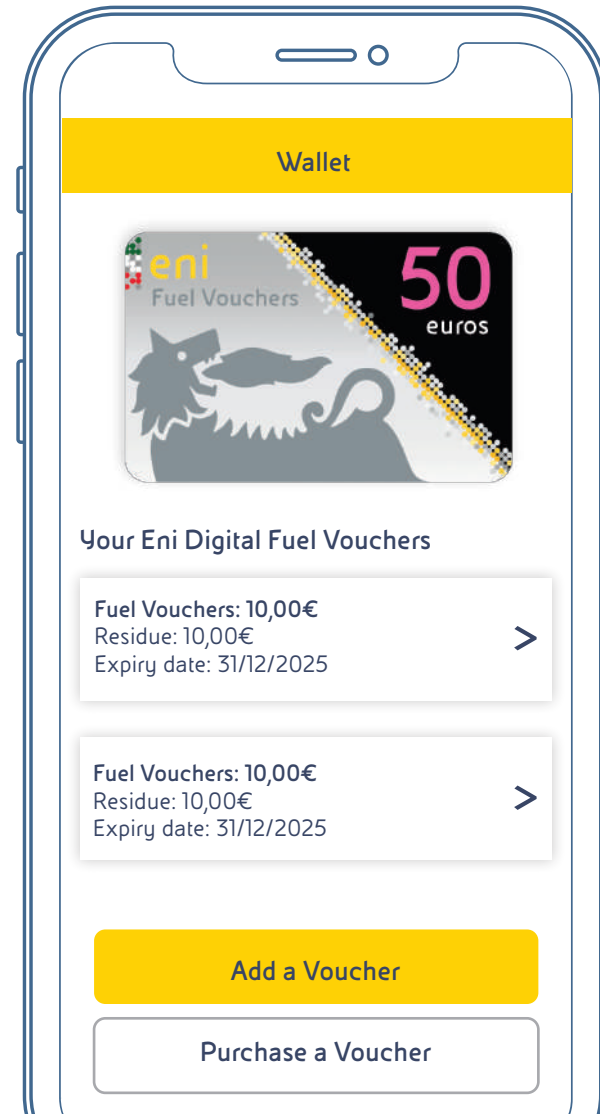
One of the benefits of the **Multicard** is that you will receive an electronic invoice, summarising all purchases, that is valid for tax purposes and payable by instalments using SEPA direct debit.

Multicard has 100,000 cardholders and is accepted at more than **4,000 Eni Live Stations** in Italy and around **21,000 service stations in 35 different European countries** due to **Eni's** membership of the **Routex network alliance** in partnership with **Aral, BP, Circle K and OMV**.

digital vouchers

Digital Fuel Vouchers are a dematerialised payment method that enables you to purchase fuel and, shortly, to recharge an electric vehicle, by uploading their face value to the App. They are prepaid, available in various amounts and can be used on multiple occasions.

Furthermore, **Digital Fuel Vouchers** grant entitlement to significant tax benefits, subject to remaining in force, when used as part of staff benefit schemes or customer promotions or as corporate gifts.





Enjoy is Italian leader in car sharing, offering the possibility of renting cars and cargo vehicles even for very short periods.

Enjoy is present in five cities and has been operating in the mobility sector for 10 years with offers for individuals and companies. The service has reached more than 1.5 million customers and more than 30 million rentals for 7 million kilometres travelled.

Solutions for companies

- More '**sustainable**' offer.
- Discounted corporate **rates on business activities** and for personal use by employees and associates.
- **Enjoy vouchers** with promotions and benefits.
- **Activation of Enjoy bubbles**, dedicated coverage areas.
- **Access to the Companies Portal**, the platform enabling management of all agreements and vouchers.

Enjoy Parking

| ROME | |
|-------------------------|--|
| TERMINI STATION |  |
| CIAMPINO AIRPORT |  |
| FIUMICINO AIRPORT |  |
| MILAN | |
| MILANO LINATE AIRPORT |  |
| PORTA GARIBALDI STATION |  |
| MILANO MALPENSA AIRPORT |  |
| TURIN | |
| CASELLE TORINO AIRPORT |  |



Electric Car sharing with battery swapping

Among the novelties, the **Enjoy** range is enriched by the inclusion in the **Enjoy** fleet of the **XEV 4040**, 100% electric city cars. Thanks to "battery swapping" technology, replacing the batteries at **Eni service stations**, the **XEV 4040** can be 100% recharged in just a few minutes, comparable to the time it takes to refuel.



The development of this new offer represents a revolution in urban mobility: a car that is only used for the time and the route needed, with zero CO₂ emissions on the road, extremely easy to handle and enriching the range of more sustainable products and services.



e-mobility

Electric mobility

Plenitude supports companies in the electrification of mobility, with solutions for the electric charging of company, customer and employee car fleets.





Services

Plenitude offers an integrated portfolio of services aiming at:

- **the sale** and installation of charging stations;
- **network connection** and infrastructure management;
- **charging station maintenance** and remote assistance;
- **supply of electricity** also from renewable sources;
- **interoperability/roaming** between Managed Service Providers to guarantee each user access and recharging from the company's charging stations and any other public network in Italy and the rest of Europe;
- **all-round administrative management** and support at all stages of the process, including payments and invoicing for the service provided.

Benefits

- **Access** to a network of 15,000 Plenitude + Be Charge charging points in Italy and Europe, to be extended to approximately 30,000 charging points by 2025 and 35,000 by 2030;
- **interoperability/roaming** access and recharging at over one hundred thousand charging points in Italy and the rest of Europe;
- **availability of a platform** for managing the company fleet and its employees' cars;
- **marketing and cross-selling actions** (digital coupons, etc.).

energy efficiency

Plenitude supports companies with the objective of reducing energy consumption and emissions into the atmosphere through energy efficiency solutions and for the self-production of energy from renewable sources.



Services

Plenitude offers an integrated mix of efficiency creation services:

- **energy diagnoses** of production plants in compliance with Legislative Decree No.73 of 14 July 2020 (amendment of Legislative Decree 102/14);
- **feasibility studies** to identify energy saving solutions;
- **carbon footprint** management and ISO 50001 certification;
- **installation of photovoltaic plants** for self-production;
- **relamping** with high-efficiency LEDs;
- **optimisation of plants** via BEMS (Building Energy Management Systems) for remote monitoring and management of plant performances also with the aid of artificial intelligence;
- **building of thermal systems** for heating or cooling with the aid of heat pumps and/or hybrid systems.

Benefits

Customers have the opportunity to take advantage of the **Energy Performance Contract (EPC)** formula that provides:

- **savings on energy expenditure;**
- **state-of-the-art installations;**
- **zero running costs;**
- **no initial investment costs** for realisation of the interventions;
- **guaranteed performance;**
- **no routine and non-routine maintenance costs** for the entire duration of the contract;
- **on expiry** the company takes ownership of the plant and obtains 100% of the savings.

white certificates

Plenitude's energy efficiency services allow companies to obtain certification of energy savings achieved with specific interventions.

Services

Plenitude provides all-round support for companies along the entire certification chain, guaranteeing:

- **the project** for obtaining the credits;
- **preparation** of the process for certification;
- **reporting of savings and application** for the issue of certificates to the competent authorities;
- **valorisation** of the certificates through a platform and sale on the market.

Benefits

Plenitude client companies receive a turnkey service that ensures them an economic contribution from the sale of Energy Efficiency Certificates.



power

A flexible and reliable power offer

Power Generation & Marketing offers electricity and services to complement the development of renewables in the transition of the electricity system towards decarbonisation.

Solid industrial experience

Power Generation & Marketing, through its operating company EniPower, ensures the combined generation of electricity and heat in Italy through six thermoelectric power plants with a total installed capacity of about 5 GW.

The combined **cycle cogeneration plants guarantee continuity**, reliability and efficiency for the electricity system, at times of reduced availability of renewable sources, while reducing emissions through the use of natural gas.

The objective is to create long-term value for all stakeholders through a systemic approach that aims to maximise the efficiency, resilience and growth of the entire industrial chain. **Power Generation & Marketing** protects the health and safety of workers and prevents damage in plants and aims at greater focus on the environment and maximising of energy savings in power plant management.



ENIPOWER POWER STATIONS AND PLANTS IN ITALY



● COMBINED CYCLES - CCGT

● DISTRICT HEATING PLANT - CCGT

Towards a zero emission future

The strategic objective of **Power Generation & Marketing**, one of the leading names on the Dispatching Services Market, is to provide flexibility services to foster the development of renewable energy sources. For this reason, it is committed to the implementation of plants and new **technological solutions** capable of providing, in the medium term, flexibility and stability for the national grid, particularly with **low-carbon energy** production (Blue Power with CCUS - carbon capture utilisation and storage), but also **through long-term energy storage**.

An ideal partner

Eni has **developed a certified and flexible sustainable business** offering that enables large customers to counter the strong volatility of markets, neutralising, even gradually, the price risk.





Activities

Asset Management

- **Combined electricity and steam production**, meeting objectives in HSE, process safety and efficient use of energy;
- **maximisation of plant technical performance**, efficiency and reliability;
- **production and sale** of industrial water;
- **management of Internal User Networks (UNs)** at operated sites;
- **management of asset integrity, maintenance and investment** processes in application of industry best practices and continuous improvement;
- **management of relations** with public and private stakeholders in the areas covered.

Market

- **Rationalisation** of the portfolio and management of associated risk;
- **management** of production plants on the dispatching services market;
- **electricity trading** on the stock exchange and B2B markets;
- **sale of electricity**, steam and process water for the energy needs of co-located customers;
- **purchase** of electricity produced by third parties;
- **trading** on the environmental certificates markets;
- **trading** on international power and CO₂ markets.

remediation, water e waste management

Eni Rewind is Eni's environmental company that operates in line with the principles of the circular economy to enhance the value of land, water and waste, industrial or from remediation, through more sustainable remediation and recovery projects in Italy and other countries.

Rewind stands for Remediation and Waste Into Development, a summary of the company's mission.



≈100
Sites under remediation



≈3,800 ha of properties in Italy
40% undergoing remediation
60% available for new development initiatives

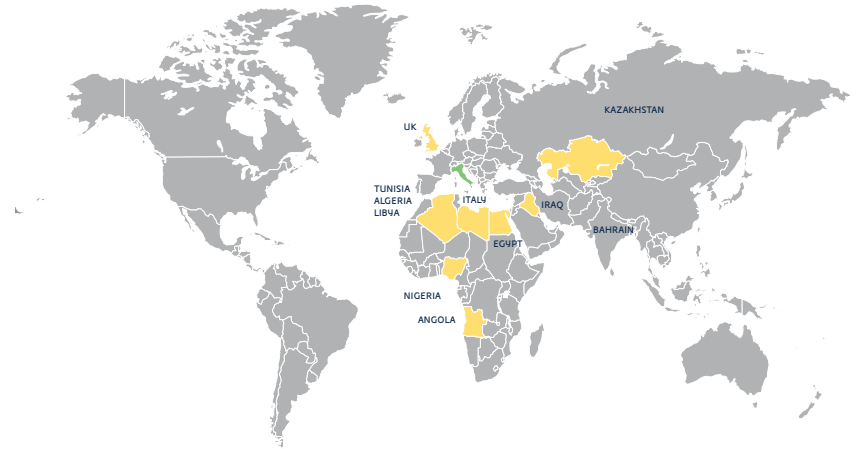


≈€ 800 mln
Annual environmental costs

Annual costs for activities



REMEDIATION - 57%
INDUSTRIAL WASTE - 27%
WATER MANAGEMENT - 16%

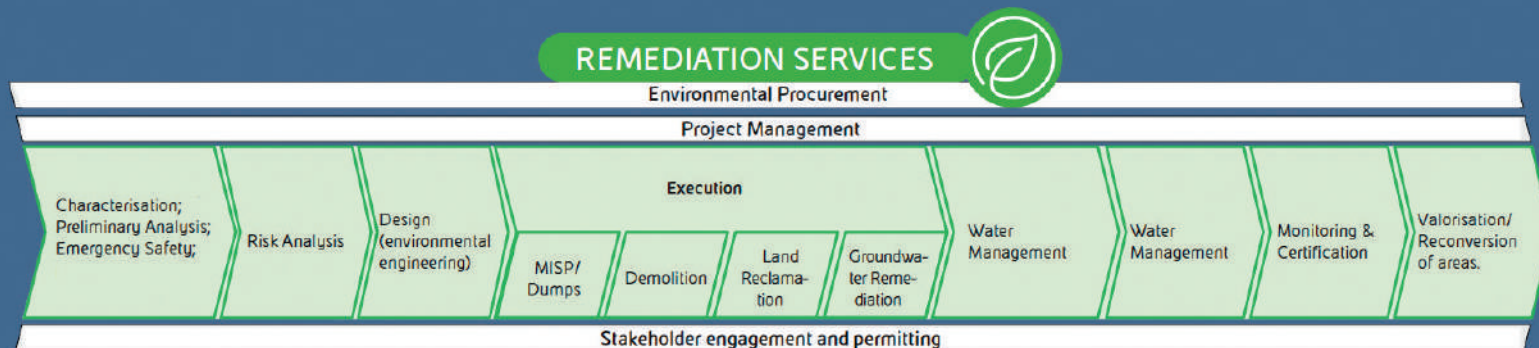


Since 2018 Eni Rewind has been supporting Eni in the development of environmental projects and services also in other countries.

Eni Rewind solutions

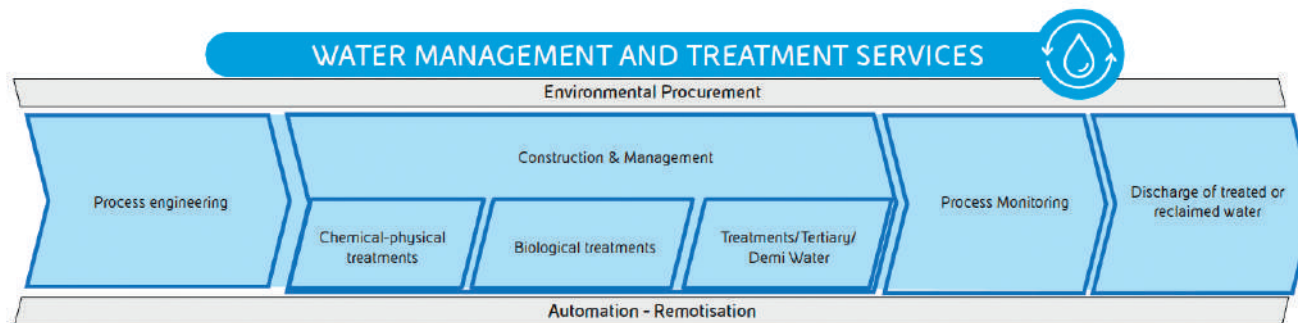
Thanks to the solid experience gained in the remediation of sites with complex and diverse industrial histories, Eni Rewind can offer tailor-made environmental solutions for every client, both public

and private, having obtained SOA certification for categories OG 12 remediation, OS 14 waste disposal and recovery, and OS 22 water purification and treatment.



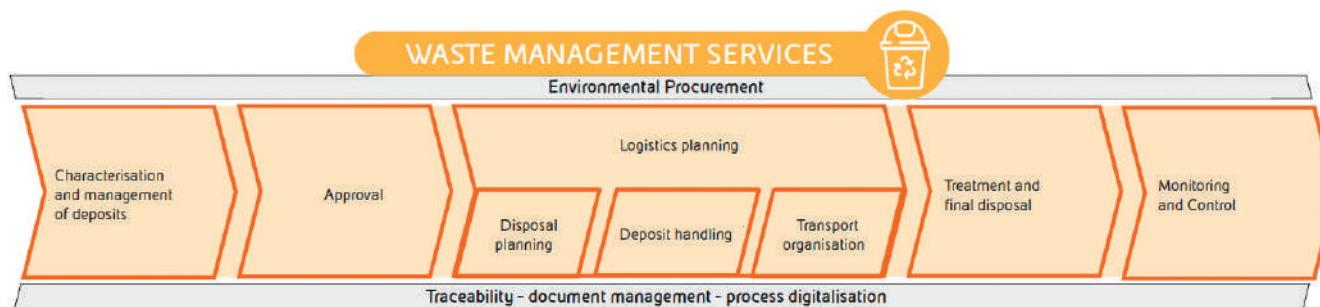
Eni Rewind oversees the entire environmental remediation process with consolidated expertise, from characterisation to certification and final monitoring, with the objective of regenerating brownfield and former industrial areas. To do this it uses integrated and specialist teams, as well as its own laboratories and dedicated permitting and

procurement personnel. The operating model is based on a participatory approach that involves stakeholders right from the preliminary stages of the work to ensure definite opportunities for redevelopment and added value of the areas in which we operate.



Eni Rewind implements and manages groundwater reclamation schemes through solutions, including innovative ones, which guarantee the efficacy and efficiency of processes for the treatment of water resources, in line with the best available technologies. The use of the most advanced methods of automation, remotisation and dynamic control

of plants and water barriers and the use of specialised in-house teams allow us to offer water management services to different industrial sectors and solutions for maximising the regeneration and reuse of treated water.



Eni Rewind manages the cycle of waste from remediation and industrial activities with efficient and more sustainable recovery and disposal solutions, in line with current regulations and industry best practices. Waste transport, disposal and recovery are guaranteed by

qualified suppliers through the definition of specific national contracts. The management model adopts advanced IT systems to reduce the distance between the site of origin and the dumping plants, thus minimizing environmental impact and enhancing traceability.





REMEDIATION

Remediation of contaminated areas to enable new opportunities for sustainable development



- Development and application of more sustainable remediation technologies
- Management of decommissioning and soil and groundwater remediation activities:
 - at decommissioned and operational industrial sites
 - of retail outlets (service stations)
 - of contaminated areas (e.g. for pipeline break-ins)
- Remediation planning with a view to the valorisation and future reuse of areas



WATER AND WASTE

Water and waste treatment to maximise recovery and reuse



- Chemical/physical/biological treatment of ground, surface and production water for reuse for industrial or irrigation purposes, contributing to the reduction in water withdrawal in nature.
- Management of the industrial and remediation waste cycle, from production to final disposal, maximising recovery and minimising waste.
- Development of technologies and skills in a partnership with the main players.



DEVELOPMENT

Development of new business to support energy transition



- Construction of new waste treatment and recovery plants in synergy with the industrial re-conversion of Eni sites.
- Use of reclaimed areas for the development, by Eni New Energy, of plants for the production of energy from renewable sources.
- Development of activities for third parties, leveraging the expertise gained in the areas of remediation and waste management.





Invix®, the hand and surface disinfectant made using plant-derived ethanol as the active ingredient, comes from the fermentation of biomass sugars. The product is a medical product authorised by Italy's Ministry of Health, developed from the formula of the World Health Organisation. The disinfectant power with antimicrobial action is guaranteed by the presence of alcohol, ethanol and hydrogen peroxide, acting on bacteria, yeasts and viruses, according to UNI EN14476, EN13727 and EN13624 standards.

The gelling agent used is cellulose-based, thus avoiding the presence of substances that can generate microplastics.

It is produced at the Versalis plant in Crescentino, Vercelli.

The range includes gels and liquids in different formats for disinfecting hands and all washable surfaces.





sunpower®

sunpower®

Sunpower® is a herbicide for professional use, with a desiccating and desuckering action, based on perlargonic acid, produced and marketed in partnership with **AlphaBio Control**.

It is a non-systemic plant protection product of natural origin, whose active ingredient is derived from renewable and biodegradable plant raw materials, used to weed annual and perennial weeds in urban and industrial settings. It does not cause resistance and acts on weeds resistant to other herbicides.





Sunpower® is effective in combating the growth of weeds that cause aesthetic and structural damage, obstruct road and rail traffic and block watercourses in:



- urban areas - public parks and gardens, tree-lined avenues, flower beds, dog areas, sports fields, cycle paths and areas, tram sleepers;



- tourist areas - campsites, camper van sites, service areas, archaeological and monument areas;

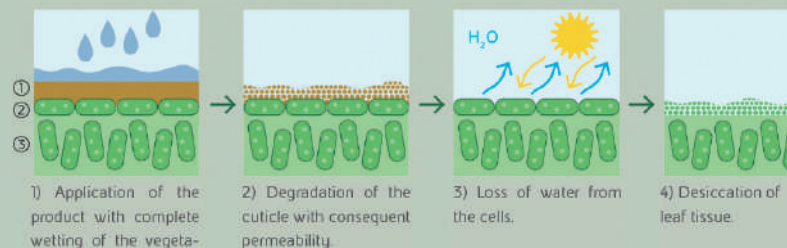


- road areas - hard shoulders, traffic islands and roundabouts, motorways, railways;



- rural and industrial areas, cemetery areas.

THE ACTION OF SUNPOWER®





balance®



BALANCE® products belong to the new Versalis family obtained from alternative feedstocks having **ISCC PLUS** certification (International Sustainability & Carbon Certification). These products guarantee identical performance, quality and properties to those of standard ones. The bio-naphtha currently utilised is supplied by Eni that has converted two refineries to biorefineries in Porto Marghera (VE) and Gela. This integration ensures a supply of sustainable feedstock obtained from vegetable oil (BA – Bio Attributed) and used cooking oil or other types of organic waste (BCA Bio-Circular Attributed).

ISCC PLUS certification allows every business in the supply chain to monitor and demonstrate product sustainability by checking compliance with sustainability, traceability and mass balance requirements.

In 2020, Versalis obtained **ISCC PLUS** certification at some Eni sites for monomers, intermediates, polymers and elastomers produced using sustainable feedstock obtained from bio-naphtha and chemical recycling. The aim is to extend **ISCC PLUS** certification activities to other Italian and foreign production sites.

**BALANCE® BA**

From bio-naphtha produced using biological feedstock (e.g. vegetable oil)

**BALANCE® BCA**

From bio-naphtha produced using biological and circular feedstock (e.g. waste fats)

**BALANCE® CA**

From circular feedstock (R-OIL, oil obtained from chemical recycling)



versalis revive[®]



Versalis Revive[®] is the line of products with different polymer bases (styrene and polyethylene) containing post-consumer urban recycled plastic, developed in Versalis research laboratories.

The technological challenge is to give new life to plastic waste through recycling, in order to obtain new products to be used in multiple quality applications.

This new line expands the portfolio of high-quality, innovative and more sustainable products that the company offers to an increasingly demanding market.

The Versalis Revive[®] portfolio is broad and diversified depending on the polymer base.

Versalis Revive[®] PE - polyethylene products are low- and high-density polyethylene-based compounds containing, depending on the grade, up to 75% plastic derived mainly from the recycling of packaging from post-consumer household and urban waste collection and recycling, and/or from commercial and industrial supply chains. These products can be used in various sectors such as industrial packaging and agriculture as mulching and drip irrigation films.





Versalis Revive® EPS - Expandable Sintered Polystyrene is the new range of expandable polystyrene containing secondary raw material supplied by the CoRePla circuit of Italian domestic waste collection and recycling (e.g. polystyrene plates, cups, trays and yoghurt pots).

The recycled material is incorporated into the finished product through the continuous mass production technology of the Versalis plant in Mantua to ensure the same performance as the virgin product. The minimum recycle content varies from 10% to 35% depending on the grade. The finished product is destined to be processed for the production of insulating panels for energy saving in buildings (thermal insulation) meeting the 'Minimum Environmental Criteria' (MEC) or for the protective packaging of household appliances and furniture. These products have received Second Life Plastic and Recyclclass certification.

Versalis Revive® PS - polystyrol - Series Forever is the range of compact polystyrene containing secondary raw material from the CoRePla circuit of Italian domestic waste collection and recycling.

The high level of purity of the recycled polystyrol and the use of specific Versalis virgin styrene polymers give rise to compounds containing 75% recycled polystyrene, guaranteeing performances capable of satisfying different needs, such as thermal insulation, packaging and household items.

XL EXTRALIGHT®



EXTRALIGHT®

XL EXTRALIGHT® produced by Finproject (Eni) is an ultra-light, closed-cell, expanded and cross-linked material, the result of an exclusive production process patented in Italy and worldwide that starts from the formulation of the material up to the moulding phase using injection technology.

Obtained from a polyolefin-based granule, it weighs about three times less than others with the same mechanical properties. Its key feature is to combine low density and excellent physical-mechanical properties with a special 'soft touch' tactility.

Many products can be made from **XL EXTRALIGHT®**, from footwear to bags, watches to seating, cushions for whirlpools to protective shells.

Shoe soles made in **XL EXTRALIGHT®** are more comfortable, lightweight, resistant and high-performance than others with the same mechanical properties.

The latest ones are called **XL EXTRALIGHT® Organix 3.0**. Lightweight, comfortable and innovative, they are composed of 30% organic and circular raw materials: organic waste/by-products (vegetable waste fats).

Another innovative product is **XL EXTRALIGHT® Sustainable +** made with 51% waste and by-products from the production cycle that instead of being dumped in landfills are recovered, resulting in a product made with more than 50% pre-consumer recycled materials.





FINPROJECT

The industrial group Finproject, today a company of Versalis (Eni), based and headquartered for almost sixty years in Morrovalle, in the Marche region, is an international leader in the production of compact and expanded PVC compounds and in the production, marketing, moulding of shoe soles and manufactured products in ultra-light materials under the XL EXTRALIGHT® brand for the most important brands in the footwear market and other industrial sectors such as automotive, interior design and safety. The company driver is to combine materials and production processes with sustainability.

Particular attention is given to the origin of raw materials, also using products of renewable origin and waste from highly engineered production processes.

carbon offset

Eni's first operations in the area of **Carbon Offset**, and in particular NCS, were initiated in the area of forest protection, according to the so-called **REDD+** (Reducing Emissions from Deforestation and Forest Degradation) scheme, working alongside governments, local communities and dedicated UN Agencies, in coherence with **NDCs** (Nationally Determined Contributions), **National Development Plans and the UN Sustainable Development Goals** (SDGs).

Thanks to a solid network of agreements with international developers, **Eni** monitors the development and implementation of projects, verifying their adherence to the principles of the **REDD+**

scheme, in order to obtain certification of the reduction of carbon emissions (**Verified Carbon Standard - VCS**) and social and environmental impacts (e.g. Climate Community & Biodiversity Standards - CCB) according to the highest, internationally recognised standards.

In the medium and long term, **Carbon Offset** initiatives based on both nature and ecosystems as well as technologies with the aim of maximising the **Carbon Dioxide Removal** component will be added.



Keystones of the Redd+ project in Zambia

- Addresses the causes of deforestation, forest degradation and obstacles to the conservation and enhancement of forest carbon stocks;
- Promotes biodiversity conservation and habitat management;
- Promotes energy efficiency in the timber sector;
- Supports the promotion and expansion of alternative and more sustainable livelihoods.

The Luangwa (Zambia) project is overseen by international partners who will monitor its development, such as BioCarbon Partners and Peace Parks Foundation. Eni has signed a 20-year Verified Carbon Unit Purchase Agreement to cover the Zambia project.



944,000 total hectares



More than ten species on the IUCN Red List monitored



58 Social projects
(2016 – 2020)



approx. 200,000 people from local
communities involved



Circular economy

The commitment to the circular economy helps to provide a strategic lever in the transition towards increasingly sustainable decarbonised energy.

Eni's energy transition process helps to provide a response to the current planetary environmental challenges and its design also leverages the circular economy that must lead to the company promoting a regenerative model: a strategic element in achieving the target of net **zero emissions by 2050** and decarbonisation of all products and services offered to its customers.

By implementing a circular model, corporate processes are re-examined, minimising the removal of natural resources, promoting the use of more sustainable inputs, reducing and making full use of waste through recovery and/or recycling schemes, extending the useful life of products and assets through

reuse or conversion. The principles of circularity are the cornerstone of **Eni's** commitment along with greater protection of the environment, air, soil, water and biodiversity.

The business models with which **Eni is starting to change** its traditional activities to a circular model provide for:

- **conversion** of conventional refineries to biorefineries
- **creation of new supply chains designed** to produce biofuels whose feedstock is waste or not competing with food crops
- **the use of waste** in biomethane production plants
- **the production of biochemicals** using renewable feedstocks



And it was with this transformation in mind that in **July 2022 Eni created the Circular Economy Business Unit (CIE)** whose task is to identify and promote new schemes for converting the production circuit to innovative and sustainable technology.

With this in mind, local areas play a central role. The relationship with them and respect for the places in which **Eni** operates can lead to the establishment of more sustainable development models capable of guaranteeing value creation in the long term.

For example, the use of waste in **waste-to-chemical** schemes currently under study and awareness campaigns regarding the collection of used cooking oil in some schools with a view to promoting best circular economy practices.

The background is a deep blue with a subtle, grainy texture. A diagonal line splits the image from the top-left corner towards the bottom-right. The area to the left of this line is a solid, lighter blue. The area to the right is the textured deep blue. A thin yellow square frame is centered in the right-hand area, enclosing the main title text.

THE FUTURE SOLUTION

FOR SUSTAINABILITY

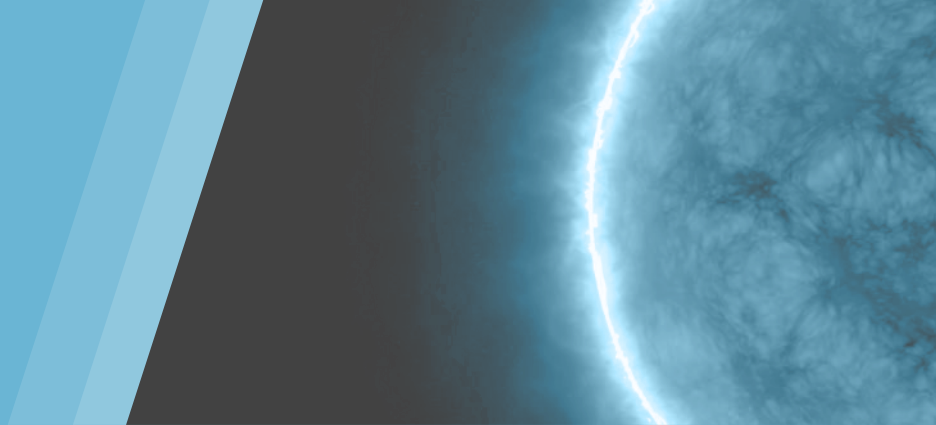
Fusion power

As part of its **decarbonisation strategy**, Eni has signed a series of agreements illustrating its desire to strengthen research and innovation partnerships in the energy sector in order to respond to growing energy demand with sustainable environmental and economic solutions.

Eni supports the development of game-changing technology capable of marking a turning point in energy transition. A vision requiring it to face great challenges, such as the development of fusion power.

Fusion power represents a veritable revolution in the energy field because, once established on an industrial scale, it will allow huge quantities of safe, zero-emission and virtually unlimited energy to be generated.

More specifically, the process aims to replicate the same principle of physics that powers the sun and other stars, consisting of the fusion of two light atoms, such



as hydrogen isotopes (deuterium and tritium), into a lighter element (helium) than the sum of the two isotopes, a reaction that releases a huge amount of energy.

However, artificially reproducing this process on Earth is extremely complex as it requires temperatures exceeding 100 million degrees.

In order to have control over the fusion process in an energy production plant, a study is underway of magnetic confinement technology that, as the name says, uses very powerful magnetic fields to manage the plasma in which fusion takes place.

Developing magnetic confinement fusion is a global challenge that involves a wide range of international talent, much of which Italian, in the field of industrial science and technology.



Eni was the first energy company to invest in fusion research and since 2018 has been a shareholder in the company Commonwealth Fusion Systems (CFS), a Massachusetts Institute of Technology (MIT) spin-out with whom it is currently working to speed up industrial deployment of the technology. CFS has one of the most challenging roadmaps in the fusion field. Indeed, CFS has scheduled construction of the first power plant capable of supplying the grid with energy for the early 2030s, whilst the demonstration device is targeted for completion in 2025 after the initial results obtained in 2021.

Eni also plays a leading role in various fusion innovation projects, along with MIT, ENEA and in partnership with the National Research Council, making an important contribution to national and international fusion energy research.

Wave power



Wave power is one of the main forms of unexploited renewable energy. Just think that 70% of the earth's surface is covered by water (of which 97% consists of seas and oceans). More specifically, the energy generated by sea waves all over the world amounts to 2 TW, corresponding to around 18,000 TWh per year, roughly equal to the annual electricity demand for the entire planet. Furthermore, wave power is more predictable, constant and of greater energy density than sun and wind power, being available both day and night.

Developed by Eni in partnership with Turin Polytechnic and the university spin-off company Wave for Energy, **ISWEC (Inertial Sea Wave Energy Converter)** is an innovative technology in the offshore renewables sector capable of converting wave power into electricity using gyroscopic precession. This highly technological solu-

tion can supply energy to offshore plants, small off-grid islands and coastal communities. **ISWEC (Inertial Sea Wave Energy Converter)** technology has been mentioned by the European Commission in its offshore renewable energy strategy as an important example of a wave energy converter.

One of the main features of **ISWEC (Inertial Sea Wave Energy Converter)** technology is the possibility of optimising energy conversion to suit sea and weather conditions, thanks to the use of a genetic algorithm that takes full advantage of the computing power offered by Eni's HPC5 (High Performance Computer) located at the Green Data Center (GDC) in Ferrera Erbognone.



Activities

In 2020, Eni opened a research centre in partnership with Turin Polytechnic, the MORE Lab (Marine Offshore Renewable Energy), a laboratory whose mission is to develop technology able to obtain maximum benefit from the various forms of marine energy such as wave power, ocean currents, tides and the salinity gradient. The MORE Lab utilises the research infrastructures at the Mechanical and Aerospace Engineering Department and promotes technology transfer between university and business.

The first pilot plant was tested in Ravenna, connected to the PC80 platform and combined with a photovoltaic system. This type of application increases the energy self-sufficiency of offshore structures located some way from the coast and perhaps in geographical contexts where an electricity supply cannot be taken for granted. In 2021, Eni took an additional step towards industrial

deployment when it decided to upgrade and reutilise off the coast of the island of Pantelleria the device tested in 2015 by Turin Polytechnic. In 2023 the installation of the device was completed, off the coast of Pantelleria, one of the locations with the highest wave power in the Mediterranean Sea. In addition, ISWEC (Inertial Sea Wave Energy Converter) will acquire data, in a genuine offshore environment, that can be used to optimise the future design of new devices.





