

Energy Evolution





Refining & Marketing and Chemicals

1.1 mmt tonnes/y
Biorefinery capacity

€152 mln
Adjusted operating profit
vs. 2020: +€146 mln

4.5 mmt tonnes
Sales of petrochemical products vs. 2020:
+3% thanks to the recover in demand

228
tonnes CO₂ eq./ktonnes
Direct GHG emissions
(Scope 1)/Refinery throughputs
(raw and semi-finished materials)
vs. 2020: -8%



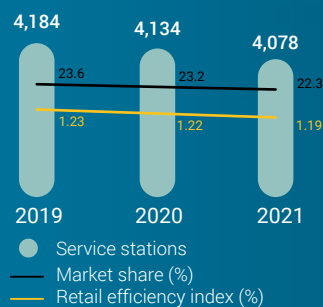
KEY PERFORMANCE INDICATORS

		2021	2020	2019
TRIR (Total Recordable Injury Rate) ^(a)	(total recordable injuries/worked hours) x 1,000,000	0.80	0.80	0.27
<i>of which: employees</i>		1.13	1.17	0.24
<i>contractors</i>		0.49	0.48	0.29
Bio throughputs	(ktonnes)	665	710	311
Capacity of biorefineries	(mmt tonnes/year)	1.1	1.1	1.1
Average biorefineries utilization rate	(%)	65	63	44
Conversion index of oil refineries		49	54	54
Average oil refineries utilization rate		76	69	88
Retail sales of petroleum products in Europe	(mmt tonnes)	7.23	6.61	8.25
Service stations in Europe at year end	(number)	5,314	5,369	5,411
Average throughput per service station in Europe	(kliters)	1,521	1,390	1,766
Retail efficiency index	(%)	1.19	1.22	1.23
Production of petrochemical products	(ktonnes)	8,476	8,073	8,068
Sale of petrochemical products		4,451	4,339	4,295
Average petrochemical plant utilization rate	(%)	66	65	67
Employees at year end	(number)	13,072	11,471	11,626
<i>of which: outside Italy</i>		4,044	2,556	2,591
Direct GHG emissions (Scope 1) ^(a)	(mmt tonnes CO ₂ eq.)	6.72	6.65	7.97
Direct GHG emissions (Scope 1)/Refinery throughputs (raw and semi-finished materials)	(tonnes CO ₂ eq./ktonnes)	228	248	248

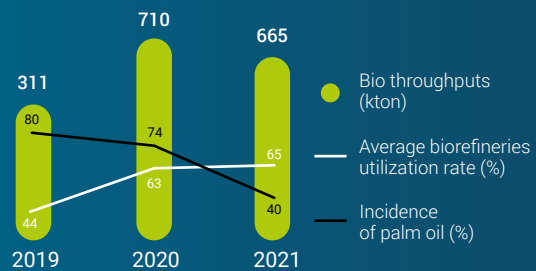
(a) Calculated on 100% operated assets.



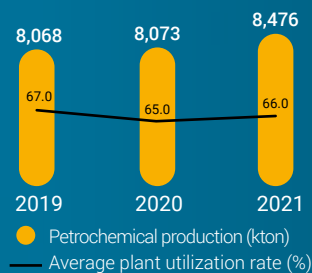
Evolution of retail network in Italy



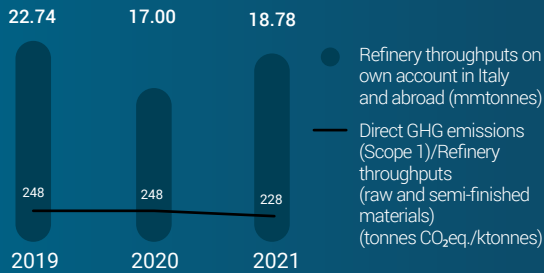
Biorefining system



Petrochemical production system



Refining energy efficiency



Performance of the year

- ▶ Total recordable injury rate (TRIR) of the workforce amounted to 0.80, substantially in line compared to the previous year.
- ▶ Direct GHG emissions (Scope 1) increased by 1% compared to 2020, following the resumption of activities mainly in the chemical business.
- ▶ Direct GHG emissions (Scope 1)/refining throughputs (raw and semi-finished materials) were down by 8% compared to the previous year, despite the increase of commodities processed at the Sannazzaro and Livorno sites.
- ▶ In 2021 Eni's refining throughputs on own account amounted to 18.78 mmtonnes (excluding the ADNOC Refining) up by 10.5% from 2020, benefitting from the 2021 economic recovery, supported by the resumption of the activities negatively affected in 2020 by the partial lockdown.
- ▶ Production of biofuels from vegetable oil amounted to 665 mmtonnes, down by 6% from 2020, affected by a particularly depressed scenario.
- ▶ Retail sales in Italy were 5.12 mmtonnes, increased by 12% from 2020 as a result of the progressive economy reopening and greater mobility of people. Market share was 22.3% (23.2% in 2020).
- ▶ Sales of petrochemical products were 4.45 mmtonnes, up by 3%, thanks to the macroeconomic growth, rebound in demand of leading sectors, such as packaging and the recovery of the automotive business.

Business developments and portfolio transaction

In order to expand the recycled polymers portfolio of Versalis Revive® and to consolidate the European leadership in styrenic polymers, Versalis acquired the technology and plants of Ecoplastic, company specialized in the recovery, recycling and transformation chain of styrenic polymers. This is the first step of the transformation project of Porto Marghera plant, which includes the installation in the next year of the plants acquired for the production of styrene polymers entirely obtained from recycle raw material. The overall capacity of the first phase will be approximately 20 ktonnes per year.

In September Versalis finalized the acquisition of the control in Finproject, exercising the call option to buy the remaining 60% of share capital, following the initial acquisition of a 40% participating interest in 2020. The acquisition is complementary to Versalis' specialties portfolio and will create an all-Italian leading platform with high-performance formulated polymer applications and compounding, less influenced by commodity fluctuations. In January Finproject has taken the ISCC Plus certification for compound productions and products from renewable raw materials.

Circular economy and green chemicals

Finalized the full share acquisition of FRI-EL Biogas Holding, Italian leader in biogas's production. The company, renamed EniBioCh4in, owns plants generating electricity from biogas and a plant for processing OFMSW, the organic fraction of municipal solid waste, which Eni intends to convert to produce biomethane, that will supply in Eni service stations.

Versalis, coherently with the Eni's decarbonization strategy, has launched a transformation plan which aims to make its activities and products diversified and sustainable, in accordance with the principles of the circular economy.

In 2021, Versalis expanded the "circular" products offering, manufactured with recycled raw materials. A new product called Versalis Revive® PS Air F – Series Forever was added to Versalis Revive® product line. It was addressed for food packaging and 75% made by recycled polystyrene from domestic waste sorting. The new product developed by Versalis and Forever Plast SpA, is the result of collaboration with various operators in the polystyrene industry such as Corepla, Pro Food e Unionplast.

Confirmed the commitment aimed at the development of sustainable innovative technologies, through the agreement signed with BTS Biogas, an Italian company engaged in the design and realization of biogas plants, to develop and market an innovative technology to produce biogas and biomethane from residual lignocellulosic biomass. The technology will focus on Versalis' technology integration for biomass thermo-mechanical pretreatment, with the BTS Biogas technology for biogas and biomethane production via fermentative ways.

Finally, signed an agreement between Matrica, a JV Versalis/Novamont company, and Lanxess, a leader in specialty chemicals for the production of biocides from renewable raw materials. In January 2022 started the supply of renewable-source raw materials obtained from vegetable oils to the Porto Torres plant. Lanxess will use these materials to produce biocidal industrial additives for the consumer goods sector.

Sustainable mobility

As part of Eni's sustainable mobility growth strategy, signed an agreement in order to offer the battery swapping service for XEV's city car at the Eni service stations. In addition, from 2022, the XEV YOYO zero-emission city car will become part of the Enjoy fleet.

In order to promote initiatives to decarbonize the aviation sector and accelerate the process of energy transition of airports, signed an agreement with SEA, the Milan Malpensa and Milan Linate airports operator, for the supply of sustainable fuels for aviation (SAF – Sustainable Aviation Fuel) and for ground handling

(HVO – Hydrotreated Vegetable Oil). This initiative is in line with the agreement finalized in January 2022 with Aeroporti di Roma which launched the first supplies of pure HVO hydrogenated biofuel, produced in Eni's biorefinery in Porto Marghera, to fuel the road vehicles for handling passengers with reduced mobility at the airport.

SAF production started in October, are produced exclusively from waste and residues, in line with the strategic decision of zeroing the use of palm oil from 2023.

As a step towards the transport decarbonization signed a letter of intent with Air Liquide for development of hydrogen mobility in Italy, in particular a feasibility and sustainability study for the development of the low carbon and renewable hydrogen supply chain to support the market of fuel cell vehicles for heavy and light mobility.

Finally signed a strategic agreement with BASF, related to a new technology that produces advanced bio-propanol from glycerin, obtained from the production of industrial biodiesel FAME (Fatty Acid Methyl Esters), intended for use as a bio component in fuel formulation.

Proprietary technologies

Proprietary technologies will play a key role in accelerating the “green” conversion of Versalis reducing dependence on oil feedstock; Eni is engaged in the chemical recycling of non-reusable plastics (HOOP technology) and the enhancement of forest biomass for production bioethanol and biogas (PROESA technology) in collaboration with qualified partners such as Saipem and BTS Biogas. As part of the valorization of proprietary technologies and the strengthening of Eni presence in the Asian continent, Versalis has licensed the mass continuous technology to Supreme Petrochem Ltd, an Indian market-leader in compact and expandable polystyrene, to create a plant in Maharashtra (India). This is a technology that allows one to produce styrene polymers with reduced environmental impact, thanks to low emission and low energy consumption.

REFINING & MARKETING

SUPPLY AND TRADING

In 2021, were purchased 18.85 mmt tonnes of crude (compared with 17.37 mmt tonnes in 2020), of which 3.85 mmt tonnes by equity crude oil, 10.79 mmt tonnes on the spot market and 4.21 mmt tonnes by producer's Countries with term contracts. The breakdown by geographic area was as follows: 20% of purchased crude came from the Middle East, 18% from Russia, 15% from Central Asia, 15% from North Africa, 11% from Italy, 11% from West Africa, 2% from North Sea and 8% from other areas.

PURCHASES

	(mmt tonnes)	2021	2020	2019	Change	% Ch.
Equity crude oil		3.85	3.55	4.24	0.30	8.5
Other crude oil		15.00	13.82	19.19	1.18	8.5
Total crude oil purchases		18.85	17.37	23.43	1.48	8.5
Purchases of intermediate products		0.26	0.11	0.26	0.15	136.4
Purchases of products		10.66	10.31	11.45	0.35	3.4
TOTAL PURCHASES		29.77	27.79	35.14	1.98	7.1
Consumption for power generation		(0.31)	(0.35)	(0.35)	0.04	11.4
Other changes ^(a)		(0.89)	(0.69)	(2.08)	(0.20)	(29.0)
TOTAL AVAILABILITY		28.57	26.75	32.71	1.82	6.8

(a) Include change in inventories, decrease due to transportation, consumption and losses.

REFINING

In 2021, Eni's refining throughputs on own account were 18.78 mmt tonnes increased by 10.5% from 2020, due to the higher throughputs in Italy, in response to a lower impact of the COVID-19 pandemic compared to the comparative period which was negatively affected by the partial lockdown of the economy, partly offset by the impact of a depressed refining scenario.

In Italy, the refinery throughputs (16.51 mmt tonnes) increased by 11.4% from 2020 following the depressed refining scenario, due to higher volumes processed at Sannazzaro refinery.

Outside Italy, Eni's refining throughputs on own account were 2.27 mmt tonnes, up by approximately 90 ktonnes or 4.1% as a result of lower standstill compared to the previous year, partly offset by negative scenario. Total throughputs in wholly-owned refineries were 14.01 mmt tonnes, increase by 1.29 mmt tonnes or 10.1% compared with 2020.

The refinery utilization rate, ratio between throughputs and refinery capacity, is 76%.

Approximately 21% of processed crude was supplied by Eni's Exploration & Production segment, with a slight decrease from 2020 (21.2%).

BIOREFINERY

The volumes of biofuels processed from vegetable oil were 665 mmt tonnes down by 6% from the previous period (40 ktonnes), as a result of standstill at Venezia biorefinery in a depressed scenario context.

In addition, the incidence rate of palm oil supplied for the production of biodiesel was reduced by approximately 34 percentage points compared to 2020, leveraging on the start-up of a new Biomass Treatment Unit (BTU) at the Gela biorefinery, enabling the use of up to 100% of biomass not in competition with the food chain for the production of biofuels. Confirmed the zeroing palm oil by 2023 in the refining processes.

In 2021 productions of biofuels (HVO) amounted to approximately 585 ktonnes (down by 6%) according to certifications in use (European RED and related directives).

AVAILABILITY OF REFINED PRODUCTS

	(mmt tonnes)	2021	2020	2019	Change	% Ch.
ITALY						
At wholly-owned refineries		14.01	12.72	17.26	1.29	10.1
Less input on account of third parties		(1.71)	(1.75)	(1.25)	0.04	2.3
At affiliated refineries		4.21	3.85	4.69	0.36	9.4
Refinery throughputs on own account		16.51	14.82	20.70	1.69	11.4
Consumption and losses		(1.11)	(0.97)	(1.38)	(0.14)	(14.8)
Products available for sale		15.40	13.85	19.32	1.55	11.2
Purchases of refined products and change in inventories		7.38	7.18	7.27	0.20	2.8
Products transferred to operations outside Italy		(0.67)	(0.66)	(0.68)	(0.01)	(1.5)
Consumption for power generation		(0.31)	(0.35)	(0.35)	0.04	11.4
Sales of products		21.80	20.02	25.56	1.78	8.9
Bio throughputs		0.67	0.71	0.31	(0.04)	(5.6)
OUTSIDE ITALY						
Refinery throughputs on own account		2.27	2.18	2.04	0.09	4.1
Consumption and losses		(0.18)	(0.17)	(0.18)	(0.01)	(5.9)
Products available for sale		2.09	2.01	1.86	0.08	4.0
Purchases of refined products and change in inventories		3.41	3.39	4.17	0.02	0.6
Products transferred from Italian operations		0.67	0.66	0.68	0.01	1.5
Sales of products		6.17	6.06	6.71	0.11	1.8
Refinery throughputs on own account in Italy and outside Italy		18.78	17.00	22.74	1.78	10.5
<i>of which: refinery throughputs of equity crude on own account</i>		<i>3.86</i>	<i>3.55</i>	<i>4.24</i>	<i>0.31</i>	<i>8.7</i>
Total sales of refined products in Italy and outside Italy		27.97	26.08	32.27	1.89	7.2
Crude oil sales		0.60	0.67	0.44	(0.07)	(10.4)
TOTAL SALES		28.57	26.75	32.71	1.82	6.8

MARKETING OF REFINED PRODUCTS

In 2021, retail sales of refined products (27.97 mmt tonnes) were up by 1.89 mmt tonnes or by 7.2% from 2020, due to the lower impact of COVID-19 crisis on mobility.

PRODUCT SALES IN ITALY AND OUTSIDE ITALY

	(mmt tonnes)	2021	2020	2019	Change	% Ch.
Retail		5.12	4.56	5.81	0.56	12.3
Wholesale		6.02	5.75	7.68	0.27	4.7
Petrochemicals		0.52	0.61	0.83	(0.09)	(14.8)
Other sales		10.14	9.10	11.24	1.04	11.4
Sales in Italy		21.80	20.02	25.56	1.78	8.9
Retail rest of Europe		2.11	2.05	2.44	0.06	2.9
Wholesale rest of Europe		2.19	2.40	2.63	(0.21)	(8.8)
Wholesale outside Europe		0.52	0.48	0.48	0.04	8.3
Other sales		1.35	1.13	1.16	0.22	19.5
Sales outside Italy		6.17	6.06	6.71	0.11	1.8
TOTAL SALES OF REFINED PRODUCTS IN ITALY AND OUTSIDE ITALY		27.97	26.08	32.27	1.89	7.2

Retail sales in Italy

In 2021, retail sales in Italy were 5.12 mmt tonnes, with an increase compared to 2020 (0.56 mmt tonnes or up by 12.3%) as consequence of the restrictive measures implemented mainly in the second quarter during the pandemic peak. Average throughput per service station (1,362 kliters) increased by 156 kliters from 2020 (1,206 kliters). Eni's retail market share of 2021 was 22.3%, slightly down from 2020 (23.2%).

As of December 31, 2021, Eni's retail network in Italy consisted of 4,078 service stations, lower by 56 units from December 31, 2020 (4,134 service stations), resulting from the negative balance of acquisitions/releases of lease concessions (65 units), a decrease of 4 motorway concession/acquisitions, partly offset by the positive balance of acquisitions/releases of network owned stations (13 units).

RETAIL AND WHOLESALSALES SALES OF REFINED PRODUCTS

	(mmt tonnes)	2021	2020	2019	Change	% Ch.
Italy		11.14	10.31	13.49	0.83	8.1
Retail sales		5.12	4.56	5.81	0.56	12.3
Gasoline		1.38	1.16	1.44	0.22	19.0
Gasoil		3.38	3.10	3.95	0.28	9.0
LPG		0.31	0.27	0.38	0.04	14.8
Others		0.05	0.03	0.04	0.02	66.7
Wholesale sales		6.02	5.75	7.68	0.27	4.7
Gasoil		3.11	3.11	3.41	0.00	0.0
Fuel Oil		0.03	0.02	0.06	0.01	50.0
LPG		0.17	0.18	0.18	(0.01)	(5.6)
Gasoline		0.34	0.30	0.47	0.04	13.3
Lubricants		0.08	0.08	0.08	0.00	0.0
Bunker		0.59	0.63	0.77	(0.04)	(6.3)
Jet fuel		0.92	0.70	1.92	0.22	31.4
Other		0.78	0.73	0.79	0.05	6.8
Outside Italy (retail+wholesale)		4.82	4.93	5.55	(0.11)	(2.2)
Gasoline		1.06	1.13	1.31	(0.07)	(6.2)
Gasoil		2.78	2.73	3.02	0.05	1.8
Jet fuel		0.07	0.09	0.29	(0.02)	(22.2)
Fuel Oil		0.08	0.13	0.09	(0.05)	(38.5)
Lubricants		0.11	0.09	0.09	0.02	22.2
LPG		0.53	0.50	0.50	0.03	6.0
Other		0.19	0.26	0.25	(0.07)	(26.9)
TOTAL RETAIL AND WHOLESALSALES SALES		15.96	15.24	19.04	0.72	4.7

Retail sales in the Rest of Europe

Retail sales in the Rest of Europe were 2.11 mmt tonnes, recorded an increase from 2020 (up by 2.9%) as a result of higher sold volumes in Austria, France and Spain benefitting from the economic recovery and greater mobility of people.

At December 31, 2021, Eni's retail network in the Rest of Europe consisted of 1,236 units, increasing by 1 unit from December 31, 2020, mainly in Spain balanced by the retail network closer in Switzerland and France. Average throughput (2,025 kliters) increased by 45 kliters compared to 2020 (1,980 kliters).

Wholesale and other sales

Wholesale sales in Italy amounted to 6.02 mmt tonnes, increasing by 4.7% from the full year of 2020, due to lower impact of the restrictive measures and the resumption of air transport.

Wholesale sales in the Rest of Europe were 2.19 mmt tonnes, down by 8.8% from 2020 particularly in Germany, Switzerland and Austria.

Supplies of feedstock to the petrochemical industry (0.52 mmt tonnes) decreased by 14.8%. Other sales in Italy and outside Italy (11.49 mmt tonnes) increased by 1.26 mmt tonnes or up by 12.3% mainly due to higher volumes sold to oil companies.

CHEMICALS

PRODUCT AVAILABILITY

	(ktonnes)	2021	2020	2019	Change	% Ch.
Intermediates		6,284	5,861	5,818	423	7.2
Polymers		2,184	2,211	2,250	(27)	(1.2)
Biochem		8	1		7	..
Production of petrochemicals		8,476	8,073	8,068	403	5.0
Moulding & Compounding		20			20	
Total productions		8,496	8,073	8,068	423	5.2
Consumption and losses		(4,590)	(4,366)	(4,307)	(224)	(5.1)
Purchases and change in inventories		565	632	534	(67)	(10.6)
Total availability		4,471	4,339	4,295	132	3.0
Intermediates		2,648	2,539	2,519	109	4.3
Polymers		1,771	1,790	1,766	(19)	(1.1)
Oilfield chemicals		24	9	10	15	..
Biochem		8	1		7	..
Sales of petrochemicals		4,451	4,339	4,295	112	2.6
Moulding & Compounding		20			20	
TOTAL SALES		4,471	4,339	4,295	132	3.0

Petrochemical sales of 4,451 ktonnes slightly increased from 2020 (up by 112 ktonnes, or 2.6%) thanks to the macroeconomic growth and the rebound in demand in leading sectors, such as packaging, durable goods sector and the recovery of the automotive sector.

This performance also reflects the ability to capture additional sales volumes thanks to the greater availability of the plants obtained by reprogramming the multi-year standstill, to reap the benefits from the recovery in demand and the reduction in imports from producer countries (USA and Middle East), also as result of temporary product shortages.

Average unit sales prices of the intermediates business increased by 56.3% from 2020, with aromatics and olefins up by 84.7% and 52.9%, respectively. The polymers reported an increase of 66.6% from 2020.

Petrochemical production of 8,476 ktonnes up by 403 ktonnes from 2020 due to higher production of intermediates business (up by 423 ktonnes), in particular olefins; these higher volumes were partially offset by lower productions of styrenics down by 78 ktonnes from 2020.

The main increases in production were registered at the Priolo site (up by 527 ktonnes) and in Dunkerque (up by 221 ktonnes), offset by lower volumes processed at Brindisi (down by 201 ktonnes) and Porto Marghera (down by 140 ktonnes).

Nominal capacity of plants were substantially unchanged from 2020. The average plant utilization rate calculated on nominal capacity was 66%, (65% in 2020).

BUSINESS TRENDS

Intermediates

Intermediates revenues (€2,166 million) increased by €837 million from 2020 (up by 63%) reflecting both the increase of commodity prices scenario and the higher product availability. Sales increased, in particular for olefins (up by 7.6%). Average unit prices increased by 56.3%, in particular aromatics (up by 84.7%), olefins (up by 52.9%) and derivatives (up by 50.1%). Intermediates production (6,284 ktonnes) registered an increase of 7.2% from 2020. Significant increases were recorded in aromatics (up by 14.2%) and in olefins (up by 7.2%). In reduction derivatives (down by 7.3%).

Polymers

Polymers revenues (€3,114 million) increased by €1,226 million or 64.9% from 2020 due to the decrease of the average unit prices (up by 66.6%). The styrenics business benefitted of the increase of prices sale (up by 68.9%) despite the decrease of sold volumes (-7.9%) due to the lower product availability as a result of the maintenance standstills in Mantova.

The decrease of volumes were mainly attributable to GPPS (down by 23%), ABS (down by 16.6%) and compact polystyrene (down by 3.3%), these lower volumes were partly offset by higher sales of styrene (up by 13.4%).

In the elastomers business, an increase of sold volumes (up by 11.4%) was attributable to lattices (up by 23.6%), EPR (up by 40.5%), and SBR rubbers (up by 14.8%). Overall, the sold volumes of polyethylene business reported a slight reduction (down by 1.4 %) with lower sales of HDPE and LDPE (down by 10.3% and 3.4%, respectively), partly offset by higher sales of EVA (up by 6.4%); in addition, average sales prices increased (up by 73.9%). Polymers productions (2,184 ktonnes) decreased from the 2020 due to the lower productions of styrenics (down by 7.9%), partly offset by higher production of elastomers (up by 13.4%).

Oilfield Chemicals, Biochem e Moulding & Compounding

Oilfield chemicals revenues (€65 million) increased by 16.1% (up by €9 million compared to 2020) as a result of the increase in sales volumes (15 ktonnes) following the effect of the new contracts signed.

Biochem business revenues (€60 million) increased by €54 million from 2020 and mainly refer to sales of disinfectant produced at the Crescentino plant. The amount also includes the share of revenue from sales of energy produced at the biomass power plant at the Crescentino hub.

Moulding & Compounding business revenues of €70 million refer to 20 ktonnes of products sold, following the consolidation of the Finproject group on October 1, 2021. The amount includes compounding activities for €21 million, moulding for €24 million and the Padanaplast activities for €25 million.

Plenitude & Power

Ebitda Plenitude

€0.6 bln

Achieved the target of >2GW of installed capacity and under construction

7.85 bln cm

Retail gas sales vs. 2020: +2%

16.49 TWh

Retail power sales to end customers vs. 2020: +32% thanks to the growth of activities in Italy and abroad

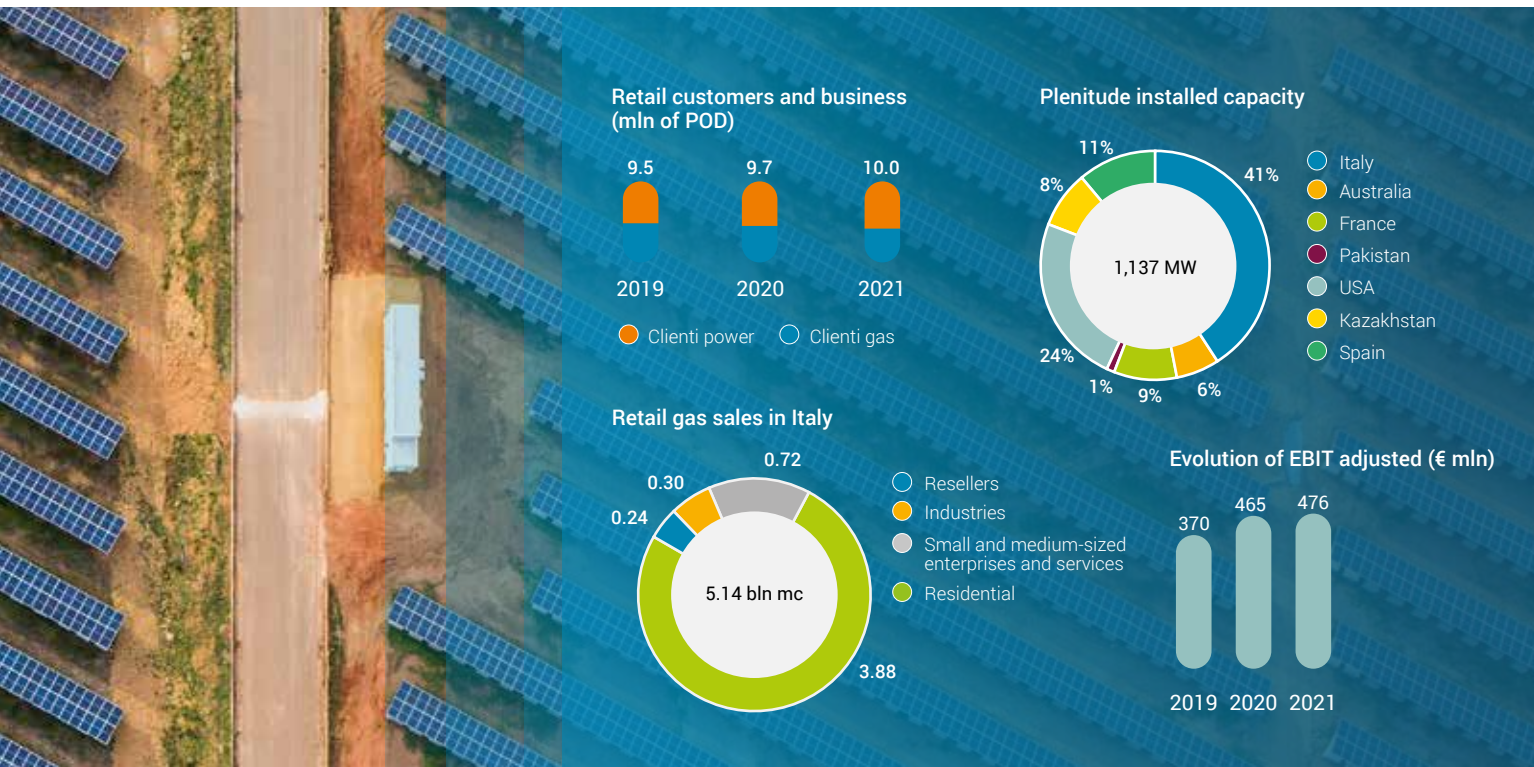
986 GWh

Production from renewables sources almost tripled vs. 2020

KEY PERFORMANCE INDICATORS

		2021	2020	2019
Total recordable incident rate (TRIR) ^(a)	(total recordable injuries/worked hours) x 1,000,000	0.29	0.32	0.62
<i>of which: employees</i>		0.49	0.00	0.30
<i>contractors</i>		0.00	0.73	0.95
Plenitude				
Retail and business gas sales	(bcm)	7.85	7.68	8.62
Retail and business power sales to end customers	(TWh)	16.49	12.49	10.92
Retail/business customers	(million of POD)	10.04	9.70	9.55
Energy production from renewable sources	(GWh)	986	340	61
Installed capacity from renewables at period end	(MW)	1,137	335	174
Power				
Power sales in the open market	(TWh)	28.54	25.33	28.28
Thermoelectric production		22.36	20.95	21.66
Employees at year end	(number)	2,464	2,092	2,056
<i>of which: outside Italy</i>		600	413	358
Direct GHG emissions (Scope 1) ^(a)	(mmtonnes CO ₂ eq.)	10.03	9.63	10.22
Direct GHG emissions (Scope 1)/equivalent produced electricity (Eni Power) ^(a)	(gCO ₂ eq./kWh eq.)	380	391	394

(a) Calculated on 100% operated assets.



Performance of the year

- ▶ The total recordable injury rate (TRIR) of the workforce improved by 9.3% compared to the 2020, as a result of the excellent performance obtained by contractors.
- ▶ Direct GHG emissions (Scope 1) reported an increase (up by 4% compared to 2020), due to the growth of the productions at the power generation sites.
- ▶ Direct GHG emissions (Scope 1)/equivalent produced electricity reported a decreasing trend from 2020 (down by 3%) following the reduced use of syngas at the Ferrera Erbognone plant.
- ▶ Energy production from renewable sources amounted to 986 GWh, almost tripled from the comparative period (340 GWh in 2020) due to the contribution of the acquired assets in operation in Italy, the United States, France and Spain.
- ▶ As of December 31, 2021, the installed capacity from renewables was 1.137 MW: 51% attributable to wind farms and 48% attributable to photovoltaic plants (installed storage capacity of 1%).
- ▶ Retail and business gas sales amounted to 7.85 bcm, up by 2% compared to 2020, as a result of the lower impact of COVID-19 and Aldro Energía acquisition.
- ▶ Retail and business power sales to end customers amounted to 16.49 TWh, recording an increase of 32% benefitting from Aldro Energía acquisition, as well as the development of the activities in Italy and abroad.
- ▶ Power sales in the open market amounted to 28.54 TWh, up by 13% following the higher volumes sold to the Power Exchange.

Portfolio valorization

As part of initiatives to extract value from portfolio restructuring by creating independent vehicles focused on attracting capital, creating value and accelerating growth, started the listing process for Plenitude, the Eni's subsidiary which comprises Gas & Power retail activities, renewables and e-mobility, with the strategic goal of

decarbonizing Eni's customer portfolio, contributing to achieve the reduction target on GHG Scope 3 emissions. The establishment of the new company Plenitude is part of the Eni's strategy and long-term commitment to be a decarbonization energy company and focused on sustainability. The decision is in line with a favorable industrial scenario, with the growth in demand of renewables energies and green energy products for retail client.

On 14 March 2022, Eni signed an agreement with the investment company Sixth Street for the sale of the 49% share in EniPower which owns six gas power plants. This agreement, subject to certain conditions precedent and authorizations of the competent Authorities, is part of Eni's strategy to enhance its assets and generate resources for the energy transition. Eni will maintain the operative control of EniPower as well as the consolidation of the company.

Portfolio developments

- ▶ In line with the strategy of decarbonization and energy transition of product and process, finalized the acquisition of 100% of Be Power Spa, a company that through its subsidiary Be Charge is the second Italian operator for installing and operating EV charging columns with over 6,000 charging points. Be Power manages its own charging stations and those of other operators through a proprietary technology platform and provides charging services to drivers of electric vehicles on its own or third-party charging stations through a dedicated app.
- ▶ Evolvere, Plenitude's subsidiary, completed the acquisition of a 100% stake in PV Family, an innovative start-up that manages My Solar Family, the largest digital community of prosumer (consumers/energy producers), in Italy with over 80 thousand subscribers. The acquisition of the capital has the objective to combine the Evolvere's supply and digital community services, in a market context that promotes a new energy model where the customer evolves from a consumer to an energy producer. With this acquisition Evolvere confirms the leadership in distributed generation from renewable sources in Italy and reaffirms the promotion of a new energy model, decentralized and sustainable, contributing to the ongoing energy transition.
- ▶ Entry into the Iberian Peninsula through the 100% acquisition of Aldro Energía, active in the market of the sale of electricity, gas and services in the residential segment with a portfolio of over 300,000 customers.
- ▶ Eni and CDP Equity established GreenIT, a new joint venture for the development, construction and management of plants for the production of electricity from renewable sources in Italy. The JV's aim is to reach a level of installed capacity of approximately 1 GW.

Business developments

Growth of the retail/business portfolio to 10 million points of delivery, up by over 300 thousand points compared to December 31, 2020 (up 4%) leveraging on the growth in Greece and the acquisition of Aldro Energía, engaged in the Spanish and Portuguese retail markets.

In 2021 continued the expansion in the national and international renewable energy market, with strong acceleration in the build-up of renewable generation capacity, leveraging targeted tuck-in acquisitions that can be quickly integrated into Eni's portfolio:

- ▶ In Italy finalized the acquisition from Glenmont Partners ("Glenmont") and PGGM Infrastructure Fund ("PGGM") of a portfolio of 13 onshore wind farms in Italy, for a total capacity of 315 MW;
- ▶ In Spain, finalized in October the acquisition from Azora Capital of 9 renewable energy projects consisting of 3 wind facilities in operation and 1 under construction for a total of 234 MW and 5 photovoltaic projects at an advanced stage of development for about 0.9 GW;
- ▶ In France and Spain finalized in October the acquisition of Dhamma Energy Group, owner of a pipeline of photovoltaic projects with a target installed capacity of about 3 GW, and installations already in operation or under construction with a capacity of approximately 120 MW;
- ▶ In Greece, in January 2022, acquired the Greek company Solar Konzept Greece "SKGR", owner of a portfolio of photovoltaic plants in Greece with a pipeline of projects targeting about 800 MW, which will form the basis for further development of the renewable portfolio in the country;
- ▶ In the UK offshore wind market finalized the agreement with Equinor and SSE Renewables for the acquisition of the 20% interest in Dogger Bank C project worth (1.2 GW), the third phase of the largest offshore wind farm in the world (3.6 GW) currently under construction in the UK North Sea. Production will start in different stages in the 2023-2025 period.

In February 2022 was expanded portfolio of renewable capacity in the United States through the acquisition from BayWa r.e. with a total capacity of 466 MW in Texas, of which 266 MW referred to Corazon I Solar plant. The plant began operations in August 2021, it will produce about 500 GWh each year, equivalent to eliminating about 250 ktonnes of CO₂ emissions annually into the atmosphere. In the same location, acquired Guajillo storage project, in advanced stage of development, with a capacity of around 200 MW/400 MWh.

In 2021, were signed a collaboration agreements to develop renewable plants with: Equinor (through Vårgrønn) for the development of an offshore wind project in the Utsira Nord, with Red Rock Power in order to make a joint bid to ScotWind proposition, and with Copenhagen Infrastructure Partners (CIP), as part of the competition for allocation of marine concessions for the offshore wind farm development in Polonia and for the subsequent participation in incentive mechanisms (contract-for-difference), which will be auctioned between 2025 and 2027.

E-mobility

As a part of the initiative for the development of the e-mobility sector in Italy, signed an agreement with Hyundai with the aim to expand the range of products for recharging electric cars and to encourage energy efficiency. Thanks to this agreement, Hyundai dealers will be able to offer their customers the purchase and the installation of the Plenitude E-start charging stations. Hyundai can also install charging stations and photovoltaic plants at their own dealerships, and adopt Plenitude's energy efficiency solutions.

The agreements signed in December with Enel X and Be Charge will permit to activate grid interoperability, allowing access to the widest national charging network of about 20,000 charging points. This synergy is part of Eni's broader strategy for the mobility of the future, which includes the evolution of the current service stations, mobility points at which we plan, among other things, to offer fast and ultra-fast charging for electric mobility.

PLENITUDE

RETAIL GAS & POWER

GAS DEMAND

Eni operates in a liberalized market where energy customers are allowed to choose the gas supplier and, according to their specific needs, to evaluate the quality of services and offers. Overall Eni supplies 10 million retail clients (gas and electricity) in Italy and Europe. In particular, clients located all over Italy are 7.8 million.

GAS SALES BY MARKET

	(bcm)	2021	2020	2019	Change	% Ch.
ITALY		5.14	5.17	5.49	(0.03)	(0.6)
Resellers		0.24	0.23	0.33	0.01	4.3
Industries		0.30	0.28	0.30	0.02	7.1
Small and medium-sized enterprises and services		0.72	0.70	0.87	0.02	2.9
Residential		3.88	3.96	3.99	(0.08)	(2.0)
INTERNATIONAL SALES		2.71	2.51	3.13	0.20	8.0
European markets:						
France		2.17	2.08	2.69	0.09	4.3
Greece		0.39	0.34	0.35	0.05	14.7
Other		0.15	0.09	0.09	0.06	66.7
RETAIL AND BUSINESS GAS SALES		7.85	7.68	8.62	0.17	2.2

RETAIL AND BUSINESS GAS SALES

In 2021, retail and business gas sales in Italy and in the rest of Europe amounted to 7.85 bcm, up by 0.17 bcm or 2% from the previous year. Sales in Italy amounted to 5.14 bcm were substantially unchanged from 2020, the reduction reported in the residential segment was mitigated by the higher volumes marketed at small and medium enterprises and resellers segments.

Sales in the European markets (2.71 bcm) are increasing of 8% or 0.20 bcm compared to 2020. Highest sales were recorded in France, Greece and Spain benefiting from the lower impact of the COVID-19 from the comparative period as well as the acquisition of Aldro Energía.

RETAIL AND BUSINESS POWER SALES TO END CUSTOMERS

In 2021, retail power sales to end customers amounted to 16.49 TWh, managed by Plenitude and the subsidiaries in France and Greece and Spain increase by 32% from 2020, due to growth of retail customers portfolio (up by 4% customers vs. 2020) thanks to the acquisition of Aldro Energía and the development of activities in Italy and abroad.

RENEWABLES

Eni is engaged in the renewable energy business (solar and wind) aiming at developing, constructing and managing renewable energy producing plant. Eni's targets in this field will be reached by leveraging on an organic development of a diversified and balanced portfolio of assets, integrated with selective asset and projects acquisitions as well as international strategic partnership.

ENERGY FROM RENEWABLE SOURCES

		2021	2020	2019	Change	% Ch.
Energy production from renewable sources	(GWh)	986	340	61	646	..
of which: photovoltaic		398	223	61	175	..
wind		588	116		472	
of which: Italy		400	112	53	288	..
outside Italy		586	227	7	359	..
of which: own consumption ^(*)		8%	23%	60%		

(*) Electricity for Eni's production sites consumptions.

Energy production from renewable sources amounted to 986 GWh (of which 398 GWh photovoltaic and 588 GWh wind) up by 646 GWh compared to 2020. The increase in production compared to the previous year benefitted from the entry in operations of new capacity, mainly for the contribution of assets already operating in Italy, France, Spain and United States.

Follows breakdown of the installed capacity by Country and technology:

INSTALLED CAPACITY AT PERIOD END (ENI'S SHARE)

		2021	2020	2019	Change	% Ch.
Installed capacity from renewables at period end	(MW)	1,137	335	174	802	239.4
of which: photovoltaic		48%	77%	76%		
wind		51%	20%	20%		
installed storage capacity		1%	3%	4%		

	(technology)	(MW)	2021	2020	2019
Italy	photovoltaic		116	112	82
Outside Italy			436	160	58
Algeria ^(*)	photovoltaic			5	5
Australia	photovoltaic		64	64	39
France	photovoltaic		108		
Pakistan	photovoltaic		10	10	10
Tunisia ^(*)	photovoltaic			9	4
United States	photovoltaic		254	72	
TOTAL PHOTOVOLTAIC INSTALLED CAPACITY			552	272	140
Italy	wind		350		
Outside Italy			235	63	34
Kazakhstan	wind		91	48	34
Spain	wind		129		
United States	wind		15	15	
TOTAL WIND INSTALLED CAPACITY			585	63	34
TOTAL INSTALLED CAPACITY AT PERIOD END (INCLUDING INSTALLED STORAGE POWER)			1,137	335	174
of which installed storage power			7	8	7

(*) Assets transferred to other segments in the fourth quarter of 2021.

At the end of 2021, the total installed and sanctioned capacity amounted to 1,137 MW +802 MW from 2020 mainly relating to acquisition in Italy (+315 MW, onshore wind), Spain (+129 MW, onshore wind) e France (+108 MW, photovoltaic), carried out during the second half of 2021, as well as the acquisition in United States (+182 MW, photovoltaic), and the completion of three plants in Puglia (+35 MW, onshore wind).

E-MOBILITY

In a context of the mobility market that includes a constant increase in the number of electric vehicles in circulation in Italy and in Europe, Plenitude, thanks to the acquisition of Be Charge, disposes one of the largest and most widespread networks of public charging infrastructure for electric vehicles.

As of December 31, 2021, there are more than 6,200 charging points distributed throughout the country. These stations are smart and user-friendly, monitored 24 hours a day by a help desk and accessible via the mobile app. Within the sector chain, Be Charge plays both the role of manager and owner of the charging infrastructure network (CPO - Charge Point Operator), and that of charging and electric mobility service provider working directly with electric vehicle users (EMSP - Electric Mobility Service Provider). Be Charge charging stations are Quick (up to 22 kW) alternating current, Fast (up to 150 kW) or HyperCharge (above 150 kW) direct current type.

POWER

AVAILABILITY OF ELECTRICITY

Eni's power generation sites are located in Brindisi, Ferrera Erbognone, Ravenna, Mantova, Ferrara and Bolgiano. As of December 31, 2021, installed operational capacity of Enipower's power plants was 4.5 GW. In 2021, thermoelectric power generation was 22.36 TWh, increase 1.41 TWh from the previous year. Electricity trading (22.79 TWh) reported an increase of 33% from 2020, thanks to the optimization of inflows and outflows of power.

POWER SALES IN THE OPEN MARKET

In 2021, power sales in the open market were 28.54 TWh, representing an increase of 13% compared to 2020, due to higher volumes marketed at Power Exchange.

		2021	2020	2019	Change	% Ch.
Purchases of natural gas	(mmcm)	4,670	4,346	4,410	324	7.5
Purchases of other fuels	(ktoe)	93	160	276	(67)	(41.9)
Power generation	(TWh)	22.36	20.95	21.66	1.41	6.7
Steam	(ktonnes)	7,362	7,591	7,646	(229)	(3.0)

AVAILABILITY OF ELECTRICITY

	(TWh)	2021	2020	2019	Change	% Ch.
Power generation		22.36	20.95	21.66	1.41	6.7
Trading of electricity ^(a)		22.79	17.09	17.83	5.70	33.4
Availability		45.15	38.04	39.49	7.11	18.7
Power sales in the open market		28.54	25.33	28.28	3.21	12.7

(a) Includes positive and negative imbalances (difference between the electricity effectively fed-in and as scheduled).

Environmental activities

around **2** mln tonnes
total waste managed

around **73%** recovered
vs. recoverable waste

around **95%** areas
with approved decree
on total contaminated areas
in sites of national priority

present in over **100**
sites of regional
and national priority
Eni global contractor



The Group's environmental activities are developed by Eni Rewind, the Eni's company that operates in line with the principles of the circular economy to give new life to land, water and waste resources, industrial or deriving from reclamation activities, through sustainable reclamation and revaluation projects, both in Italy and abroad.

Through its integrated end-to-end model, Eni Rewind guarantees the supervision of every phase of the process reclamation and waste management, planning, from the early stages, the projects of enhancement and reuse of resources (soils, water, waste), making them available for new development opportunities.

Reclamation activities

Coherently with the expertise gained and in agreement with the institutions and stakeholders, Eni Rewind identifies the projects for enhancement and reuse of reclaimed areas, allowing the environmental recovery of former industrial area and the resumption of the local economy. In this context, during 2021, were identified suitable areas for the installation of photovoltaic and wind plants.

In 2021, Eni Rewind, owner of the Ponticelle area in Ravenna, a disused industrial area outside the petrochemical plant of Ravenna, obtained the certification for the activities of Permanent Safety Measures (MISP), with the realization of a capping. In addition, was started a redevelopment plan production that includes the application of innovative, sustainable and recovery technologies, as well as to the urbanization works of the area. In the area object of MISP is planned the construction of a photovoltaic plant and a biorecovery platform for the subsequent reuse of land and management of industrial waste. In particular, the latter will be managed by HEA SpA, a joint venture between Eni Rewind and Herambiente Servizi Industriali established in March 2021.



Water & Waste Management

Eni Rewind manages water treatment, aimed at reclamation activities, through an integrated aquifer interception system and the conveyance of water for purification to treatment plants.

Currently 42 treatment plants are fully in operation and in Italy, with over 36 million cubic meters of treated water in 2021. Continued the activities of automation and digitalization of groundwater treatment plants and implementation of the remote control. The activity of recovery and reuse of treated water for the production of demineralized water is ongoing for industrial use, as part of the operational plans for the remediation of contaminated sites. In 2021 about 9 million cubic meters of water have been reused after treatment, with an increase of over 3 million cubic meters compared to 2020.

During 2021, completed the installation of 44 devices using the proprietary technology E-Hyrec® for the selective removal of hydrocarbons from groundwater, allowing the improvement of the effectiveness and efficiency of groundwater reclamation, with significant reductions in extraction times and avoiding the disposal of more than 1,000 tons of waste equivalent.

In addition, are ongoing the activities related to the application of Blue Water technology, aimed at treatment and the recovery of production water deriving from crude oil extraction activities. It's underway the preliminary inquiry for obtaining authorizations from Local Authorities to carry out the first plant on an industrial scale in the Val d'Agri Oil Center in Viggiano, in the Region of Basilicata.

Eni Rewind also operates as Eni's competence center for management of waste deriving from Eni's environmental remediation activities and production activities in Italy, thanks to its model that, by adopting the best technological solutions available on the market, allows to minimize costs and environmental impacts.

During 2021, Eni Rewind managed a total of approximately 1.9 million tonnes¹ of waste by sending for recovery or disposal at external plants.

In particular, the recovery index (ratio of recovered/recoverable waste) in 2021 was 73%: the slight decrease compared to 2020 (78%) is due to the qualitative and particle size characteristics of the reclamation waste, detected during characterization, which prevented and/or limited its recovery compared to the previous year, as well as a reduction in availability from external plants, in order to recovery, in specific regions of Italy.

Relating to waste management in line with the principles of the circular economy, the valorization of resources and synergy with the territory, continues the company's commitment to the development of the Eni's proprietary 'Waste to Fuel' technology that treats the organic fraction of municipal waste to produce bio-oil and biomethane, as well as recovering the water that constitutes the main component of the so-called "wet", for new industrial and irrigation uses.

Certification

In 2021 Eni Rewind obtained SOA Certification, the mandatory certification for participation in tenders to execute public works contracts with a basic auction amount exceeding €150,000, for its core activities in the OG 12 Reclamation and protection works and plants environmental and in the specialized categories OS 22 Drinking water and purification plants and OS 14 – Waste disposal and recovery plants.

Not-captive initiatives

Starting from 2020, Eni Rewind has expanded the scope of its activities outside the group. In 2021, continued the activities related to the finalization of contracts with Edison, for the reclamation of the Mantova site and Altomonte (Cosenza) and with Acciaierie d'Italia, for the design of reclamation interventions of the former Ilva area in Taranto.

In addition completed the qualification processes as a supplier for important national and international operators (Arcadis, MOL Group, Edison, Tamoil, TOTAL, Q8, ADNOC).

Started the participation in several tenders with leading national operators, awarding the contract with ANAS, for survey and characterization services in the Adriatic area (Emilia Romagna, Marche, Abruzzo, Molise, Puglia), where Eni Rewind will provide chemical analysis service, through its environmental laboratories.

Signed collaboration agreements with main Italian companies that manage collection and processing of urban waste and with key players in the supply chain (CONAI). These agreements are aimed at assessing the opportunity of setting up new waste treatment and recovery plants on reclaimed land or will become available following the progressive conversion of Eni's refining and chemical sites.

(1) The volume includes waste deriving from the management of the environmental activities of the points of sale network (about 92 ktonnes), whose "producer" is the same environmental company in charge of the execution out the work.

Eni Rewind outside Italy

Eni Rewind, starting from 2018, has made its expertise available to Eni's subsidiaries located in foreign countries for environmental issues, in particular for management and enhancement activities of the water resource, soil, as well as training and knowledge sharing.

In January 2021, Eni Rewind signed a Memorandum of Understanding (MoU) with the National Authority for oil and gas of the Kingdom of Bahrain (NOGA) with the target to identify and promote joint initiatives for the management, recovery and reuse of water and soil resources and waste in the country. In October, an assessment was carried out at the petrochemical plants and refining of the Kingdom of Bahrain which has identified three possible areas of activity for Eni Rewind related to groundwater modeling, waste management and field testing of the proprietary E-Hyrec® technology.

Eni Rewind obtained the qualification as a supplier to Abu Dhabi Oil Company (ADNOC) for the activities of demolition and reclamation.

Completed the feasibility studies on the optimization of waste water management and process water through its reuse for plants located in Algeria and Libya and extended the design services to foreign subsidiaries for environmental activities and decommissioning of the operative and disposed points sales.