

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%



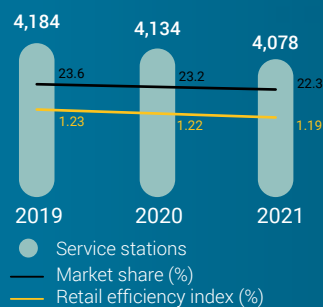
KEY PERFORMANCE INDICATORS

		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

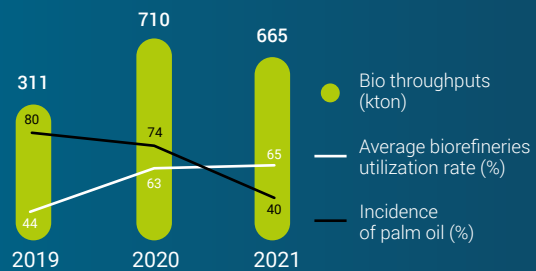
(a) Calculated on 100% operated assets.



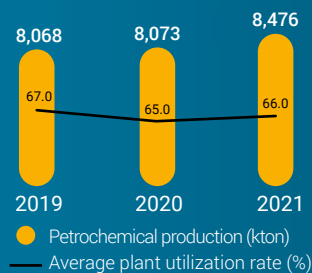
Evolution of retail network in Italy



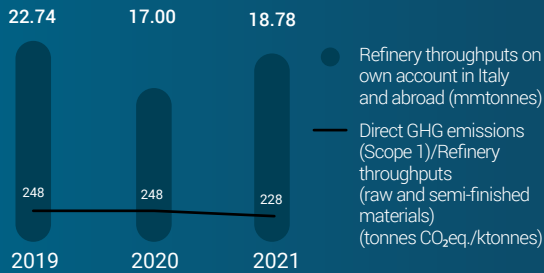
Biorefining system



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 mmtonnes of crude (compared with 17.37 mmtonnes in 2020), of which 3.85 mmtonnes by equity crude oil, 10.79 mmtonnes on the spot market and 4.21 mmtonnes 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

	(mmtonnes)	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>		3.86	3.55	4.24	0.31	8.7
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.