



# Environmental Data

## GHG Emissions – Absolute

	Unit	2021	2020	2019	2018	2017
Total GHG direct, Scope 1 <sup>1</sup>	mn t CO <sub>2</sub> equivalent	13.9	10.7	10.6	11.1	11.1
of which from E&P	mn t CO <sub>2</sub> equivalent	3.2	3.5	4.2	3.6	3.5
of which from R&M	mn t CO <sub>2</sub> equivalent	6.8	6.6	6.4	7.6	7.7
of which from C&M	mn t CO <sub>2</sub> equivalent	3.9	0,6 <sup>4</sup>	n.r.	n.r.	n.r.
CO <sub>2</sub>	mn t	12.9	9.9	9.4	10.0	10.2
CH <sub>4</sub>	t	30,672	32,999	49,376	44,782	38,807
N <sub>2</sub> O	t	818	217	74	57	52
Total GHG indirect, Scope 2 <sup>2</sup>	mn t CO <sub>2</sub> equivalent	1.1	0.3	0.4	0.4	0.3
Total GHG indirect, Scope 3 <sup>3,5</sup>	mn t CO <sub>2</sub> equivalent	156.4	118.0	126.0	108.0	108.0
GHG emissions from processing and use of sold products (Scope 3, categories 10 and 11)	mn t CO <sub>2</sub> equivalent	130.0	112.2	119.8	100.4	107.2
of which from oil to energy	mn t CO <sub>2</sub> equivalent	58.4	54.8	68.2	58.2	73.8
of which from oil for non-energy use	mn t CO <sub>2</sub> equivalent	5.4	7.1	7.7	6.2	6.6
of which from gas to energy	mn t CO <sub>2</sub> equivalent	54.5	48.0	41.8	34.4	25.9
of which from gas for non-energy use	mn t CO <sub>2</sub> equivalent	2.6	2.3	2.0	1.5	0.9
of which from chemicals	mn t CO <sub>2</sub> equivalent	9.0	0.01	0.01	0.01	0.01
GHG emissions from purchased goods and services and capital goods (Scope 3, categories 1 and 2)	mn t CO <sub>2</sub> equivalent	13.5	5.5	6.3	7.2	1.3
of which from purchased goods and services	mn t CO <sub>2</sub> equivalent	13.0	5.3	6.1	5.7	1.1
of which from capital goods	mn t CO <sub>2</sub> equivalent	0.5	0.2	0.2	0.2	0.1
GHG emissions from fuel- and energy-related activities not included in Scope 1 or 2 (Scope 3, category 3)	mn t CO <sub>2</sub> equivalent	0.5	n.r.	n.r.	n.r.	n.r.
GHG emissions from waste generated in operations (Scope 3, category 5)	mn t CO <sub>2</sub> equivalent	0.3	n.r.	n.r.	n.r.	n.r.



	Unit	2021	2020	2019	2018	2017
GHG emissions from end-of-life treatment of sold products (Scope 3, category 12)	mn t CO <sub>2</sub> equivalent	12.1	n.r.	n.r.	n.r.	n.r.
Biogenic CO <sub>2</sub> emissions	mn t CO <sub>2</sub> equivalent	1.55	1.44	1.53	1.30	1.24

<sup>1</sup> Scope 1 refers to direct emissions from operations that are owned or controlled by the organization. We use emission factors from different sources, e.g., IPCC, API GHG Compendium, etc. Since 2016, OMV has been applying global warming potentials of the IPCC Fourth Assessment Report (AR4 – 100 years).

<sup>2</sup> Scope 2 refers to indirect emissions resulting from the generation of purchased or acquired electricity, heating, cooling, or steam. We use emission factors from different sources, e.g., national authorities, supplier-specific emission factors, etc. The data in the table refers to the market-based approach. Location-based is 1.0 mn t.

<sup>3</sup> Scope 3 refers to other indirect emissions that occur outside the organization, including both Upstream and Downstream emissions. We use emission factors from different sources, e.g., IPCC, PlasticsEurope, Dbeis, etc. The data includes Scope 3 emissions from the use and processing of sold products. Pure “trading margin” sales as well as intracompany sales are excluded. Since 2015, Scope 3 emissions from purchased goods and services and capital goods are included. Since 2018, net import of refinery feedstock is included.

<sup>4</sup> Only EU ETS emissions from November and December included

<sup>5</sup> Borealis Scope 3 category 15 emissions are accounted as 21.0 mn t CO<sub>2</sub> equivalent, but not yet included in OMV's Group consolidation.

n.r. = not reported

## GHG Emissions – Intensities<sup>1</sup>

	Unit	2021	2020	2019	2018	2017
GHG intensity of operations	OMV Group Carbon Intensity Index <sup>2</sup>	82	81	78	86	n.r.
Reduction achieved vs. 2010	%	18	19	22	14	n.r.
GHG intensity of product portfolio	mn t GHG per mn t oil equivalent	2.5	2.5	2.5	2.5	2.6
GHG intensity of purchased goods and services and capital goods	mn t GHG per EUR bn	0.78	1.14	0.89	0.90	0.79
Carbon intensity of energy supply <sup>3</sup>	g CO <sub>2</sub> /MJ	66.4	66.9	68.3	70.0	n.r.
Methane intensity	%	0.6	0.7	1.1	n.r.	n.r.

<sup>1</sup> Excluding Borealis

<sup>2</sup> Direct CO<sub>2</sub> equivalent emissions produced to generate a certain business output using the following business-specific metric – Upstream: t CO<sub>2</sub> equivalent/toe produced, refineries: t CO<sub>2</sub> equivalent/t throughput (crude and semi-finished products without blended volumes), power: t CO<sub>2</sub> equivalent/MWh produced – consolidated into an OMV Group Carbon Intensity Operations Index, based on weighted average of the business segments' carbon intensity. The Carbon Intensity Index was developed in 2018.

<sup>3</sup> The carbon intensity of energy supply is measured by assessing the intensity of their Scope 1 and 2 emissions plus Scope 3 emissions (in g CO<sub>2</sub>) from the use of sold energy products, against the total energy value of all externally sold energy products (in MJ).

n.r. = not reported



## GHG Emission – Reductions<sup>1</sup>

	Unit	2021	2020	2019	2018	2017
GHG reductions from projects per year	t CO <sub>2</sub> equivalent	79,470	77,900	154,522	374,000	174,000
GHG reductions from projects to date (from 2009)	mn t CO <sub>2</sub> equivalent	2.0	1.9	1.8	1.7	1.2

<sup>1</sup> Excluding Borealis

## Other Air Emissions

	Unit	2021	2020	2019	2018	2017
SO <sub>2</sub>	t	2,544	2,720	2,627	3,090	2,995
NO <sub>x</sub>	t	10,302	7,701	7,441	11,231	12,730
NM VOC	t	12,259	10,898	11,011	9,400	8,689
Particulate emissions	t	635	172	124	138	145
Ozone-depleting substances	t	0.2	0.5	0.4	0.4	0.5

## Flaring and Venting

	Unit	2021	2020	2019	2018	2017
Hydrocarbons flared	t	361,965	388,644	426,251	233,770	185,832
Hydrocarbons vented	t	14,672	17,909	34,282	37,420	32,834



## Energy

	Unit	2021	2020	2019	2018	2017
Energy consumption <sup>1</sup>	PJ	176.5	131.1	117.4	127.4	130.8
Fuel consumption within the organization	PJ	176.6	141.4	128.6	152.5	157.5
Self-generated non-fuel renewable energy	MWh	14,309.0	87.4	n.r.	n.r.	n.r.
Purchased electricity consumption <sup>2</sup>	PJ	16.6	8.6	2.9	3.5	2.9
Heating, cooling, and steam consumption	PJ	4.3	0.9	0.1	0.1	0.0
Electricity sold <sup>3</sup>	PJ	16.5	14.2	11.3	23.9	24.5
Heating, cooling, and steam sold <sup>4</sup>	PJ	4.0	3.1	2.9	2.7	3.3

<sup>1</sup> Refers to the total energy used for operations based on site calculations with specific data and methodology

<sup>2</sup> Includes only electricity purchased and consumed. Electricity consumed from own generation is included in fuel consumption.

<sup>3</sup> Calculation methodology changed in 2020 to exclude electricity internally sold; prior years' data restated

<sup>4</sup> Calculation methodology changed in 2020 to exclude heating, cooling, and steam sold internally

n.r. = not reported

## Water and Wastewater

	Unit	2021	2020	2019	2018	2017
<b>Water withdrawal</b>						
Water withdrawn <sup>1</sup>	megaliters	827,211	224,971	103,637	100,381	98,523
thereof groundwater	megaliters	34,903	25,443	24,117	23,964	24,530
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids)	megaliters	34,805	22,996	23,836	23,716	24,144
thereof other water ( $> 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	98	262	281	247	386
thereof surface water	megaliters	294,270	60,778	14,054	14,955	11,526
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	294,270	14,539	14,054	14,955	11,526
thereof once-through cooling water	megaliters	276,359	47,124	0	0	0
thereof other water ( $> 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	0	0	0
thereof water from public supply systems	megaliters	3,825	1,755	1,360	1,477	1,509
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	3,825	1,092	1,360	1,477	1,509
thereof other water ( $> 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	0	0	0
thereof seawater	megaliters	436,337	75,718	920	586	577
thereof once-through cooling water	megaliters	435,493	71,784	0	280,963	411,854
thereof produced water	megaliters	57,875	61,256	63,186	59,400	60,382
Water withdrawn from all areas with water stress	megaliters	3,550	1,479	1,230	1,775	2,524
thereof groundwater	megaliters	2,179	491	399	645	1,144



	Unit	2021	2020	2019	2018	2017
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	325	229	118	398	758
thereof other water ( $> 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	98	262	281	247	386
thereof surface water <sup>2</sup>	megaliters	0	0	0	0	0
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	0	0	0
thereof other water ( $> 1,000$ mg/L mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	0	0	0
thereof water from public supply systems	megaliters	712	54	67	82	84
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	24	54	67	82	84
thereof other water ( $> 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	0	0	0
thereof seawater <sup>2</sup>	megaliters	0	0	0	0	0
thereof produced water	megaliters	659	607	764	1,048	1,297
<b>Water discharge</b>						
Water discharged by destination	megaliters	758,033	25,464	n.r.	n.r.	n.r.
thereof to groundwater	megaliters	846	0	n.r.	n.r.	n.r.
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids)	megaliters	0	0	n.r.	n.r.	n.r.
thereof other water ( $> 1,000$ mg/l total dissolved solids)	megaliters	846	0	n.r.	n.r.	n.r.
thereof to surface water	megaliters	303,325	16,474	n.r.	n.r.	n.r.
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids)	megaliters	298,467	10,913	n.r.	n.r.	n.r.
thereof once-through cooling water	megaliters	276,363	47,124	n.r.	n.r.	n.r.
thereof other water ( $> 1,000$ mg/l total dissolved solids)	megaliters	4,857	5,561	n.r.	n.r.	n.r.
thereof to seawater	megaliters	438,920	4,581	n.r.	n.r.	n.r.
thereof once-through cooling water	megaliters	435,901	71,784	n.r.	n.r.	n.r.
thereof to third party	megaliters	14,937	4,409	n.r.	n.r.	n.r.
thereof to others	megaliters	5	n.r.	n.r.	n.r.	n.r.
Water discharged by destination to all areas with water stress	megaliters	2,467	61	n.r.	n.r.	n.r.
thereof to groundwater	megaliters	846	0	n.r.	n.r.	n.r.
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	n.r.	n.r.	n.r.
thereof other water ( $> 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	n.r.	n.r.	n.r.
thereof to surface water	megaliters	938	0	n.r.	n.r.	n.r.
thereof freshwater ( $\leq 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	n.r.	n.r.	n.r.
thereof other water ( $> 1,000$ mg/l total dissolved solids) <sup>2</sup>	megaliters	0	0	n.r.	n.r.	n.r.
thereof to seawater	megaliters	0	0	n.r.	n.r.	n.r.
thereof to third party	megaliters	678	61	n.r.	n.r.	n.r.
thereof to others <sup>2</sup>	megaliters	5	n.r.	n.r.	n.r.	n.r.
<b>Water discharge – quality</b>						
Hydrocarbons (oil) discharged	t	6	13	n.r.	n.r.	n.r.



	Unit	2021	2020	2019	2018	2017
<b>Water consumption<sup>3</sup></b>						
Water consumed	megaliters	70,484	65,357	74,924	75,135	76,152
Water consumed in all areas with water stress	megaliters	1,140	647	1,158	1,691	2,428
<b>Water reuse</b>						
Water recycled and reused	megaliters	319,618	315,327	251,959	7,041	6,859
<b>Produced water</b>						
Produced water generated	megaliters	57,875	61,256	63,186	59,400	60,382
Produced water injected	megaliters	52,325	n.r.	n.r.	n.r.	n.r.
Produced water discharged	megaliters	3,060	n.r.	n.r.	n.r.	n.r.

<sup>1</sup> The increase compared to previous years is due to the inclusion of full-year water data provided by Borealis. At Borealis, most of the water that is withdrawn is used for once-through-cooling. Around 2/3 is brackish water. The cooling water that is discharged is of the same quality and only has a very slightly elevated temperature.

<sup>2</sup> Borealis figures are included in the total water withdrawal, water withdrawal from areas with water stress, water discharge, water discharged to areas with water stress, and water consumption, but Borealis figures are not available at a detailed level.

<sup>3</sup> Water consumption is calculated as water withdrawal minus water discharge. The figures above might not balance as other types of water, such as rainwater, are usually not included in water withdrawal.

n.r. = not reported

## Waste

	Unit	2021	2020	2019	2018	2017
Total waste <sup>1</sup>	t	799,048	634,885	633,722	583,831	460,247
thereof non-hazardous waste	t	431,420	241,221	323,268	315,219	224,008
thereof non-hazardous waste to landfill	t	106,494	108,792	n.r.	n.r.	n.r.
thereof non-hazardous waste for recycling	t	48,416	21,690	n.r.	n.r.	n.r.
thereof non-hazardous waste for incineration	t	26,300	6,021	n.r.	n.r.	n.r.
thereof non-hazardous waste for other disposal options	t	38,399	19,130	n.r.	n.r.	n.r.
thereof other (preparation for reuse and other recovery options)	t	211,853	85,589	n.r.	n.r.	n.r.
thereof hazardous waste	t	367,627	393,664	310,453	268,611	236,239
thereof hazardous waste to landfill	t	6,294	7,995	n.r.	n.r.	n.r.
thereof hazardous waste for recycling	t	277,074	308,580	n.r.	n.r.	n.r.
thereof hazardous waste for incineration	t	21,914	20,066	n.r.	n.r.	n.r.
thereof hazardous waste for other disposal options	t	59,704	48,222	n.r.	n.r.	n.r.
thereof transboundary movement of hazardous waste (Basel convention)	t	1,421	8,129	n.r.	n.r.	n.r.
thereof other (preparation for reuse and other recovery options)	t	1,221	672	20	0	0
Waste directed to disposal	t	539,985	204,120	308,523	360,357	258,086



	Unit	2021	2020	2019	2018	2017
Waste diverted from disposal	t	259,063	430,765	n.r.	n.r.	n.r.
Waste recovery or recycling rate	%	68%	68%	51%	38%	44%

<sup>1</sup> Total waste amounts including those from one-time projects

n.r. = not reported

## Spills

	Unit	2021	2020	2019	2018	2017
Spills	number	2,232	2,390	2,047	2,184	2,403
of which major (i.e., severity level 3 to 5)	number	3	0	1	2	1
Spills volume released	liters	80,976	41,355	56,641	36,874	173,909

## Environmental Expenditures<sup>1</sup>

	Unit	2021	2020	2019	2018	2017
Environmental protection expenditures, excluding depreciation	mn EUR	240	135	220	196	197
Environmental investments for assets put into operation	mn EUR	150	84	98	134	57

<sup>1</sup> Excluding Borealis