





Climate Change

OMV clearly recognizes that climate change is one of the most important global challenges today and fully supports the goals set forth by the Paris Climate Change Agreement. By 2050, OMV aims to transform into a net-zero business. This commitment includes not just our operations (Scope 1 and 2), but also our product portfolio and other material Scope 3 emissions.⁸



This year, OMV has set out a roadmap with concrete interim short-, mid-, and long-term targets for the first time. OMV targets are set at an absolute and intensity level with the ultimate goal of achieving net-zero emissions in Scopes 1, 2, and 3 by 2050. For Scopes 1 and 2, OMV aims for an absolute reduction of 30% by 2030 and of 60% by 2040. For Scope 3, OMV strives for a reduction of at least 20% by 2030 and of 50% by 2040⁹. These absolute targets are the key to reducing the carbon intensity of our energy supply¹⁰, targeting a decline of 20% by 2030 and of 50% by 2040. These targets are approximated to IEA's Sustainable Development Scenario (SDS). However, our ambition is to achieve net-zero emissions already by 2050, thus being aligned with the IEA's Net Zero Emissions (NZE) Scenario.

To achieve these targets, OMV takes climate action in its operations, product and service portfolio, innovations and R&D activities, working environment, and social investments. There is no silver bullet for tackling climate change. Reaching our 2030 targets and beyond will require a considerable effort by all of our business units, but it will be done by building on existing strengths and know-how.

These are the key pillars that will enable us to meet our goals:

A significant decrease in fossil fuels and natural gas sales: By 2030, we intend to reduce oil and gas production levels to below 400 kboe/d and cut crude distillation throughput by 2.6 mn t.

⁸ The following Scope 3 categories are included: Category 11: Use of Sold Products for OMV's energy segment, Category 1: Purchased Goods (feedstocks) from OMV's non-energy business segment, and Category 12: End-of-Life of Sold Products for OMV's non-energy segment.

⁹ For the absolute targets for Scope 1, 2, and 3 emissions set for 2030 and 2040, the base year emissions in 2019 have been recalculated to include emissions from Borealis, in which OMV acquired a majority stake in 2020. Target achievement here is not directly comparable to the 2019 data in Performance in Detail – Environmental Data, where figures do not include Borealis.

¹⁰ The carbon intensity of the energy supply is measured by assessing the intensity of the Scope 1 and 2 emissions plus Scope 3 emissions (in g CO₂) from the use of sold energy products, against the total energy value of all externally sold energy products (in MJ) (excluding purely traded volumes).





- An increase in zero-carbon energy sales: There will be a significant increase in sustainable and biobased fuels, green gas sales, and a build-up of photovoltaic electricity capacity for captive use, as well as geothermal heat.
- An increase in polyolefins recycling and sustainable feedstocks: We will deliver approximately 2 mn t/year of circular products, that is, polyolefins manufactured from recyclate or biogenic feedstock rather than fossil sources.
- Improved energy efficiency
- All energy purchases in the Chemicals & Materials segment will be 100% renewable. In 2021, electricity purchased by Chemicals & Materials accounted for 12.8 PJ approximately 77% of OMV's total electricity purchased.

Besides these efforts, neutralization measures will be necessary. OMV anticipates that it will develop around 5 mn t per year of CCS capacity across all business units. OMV aims to support and accelerate the energy transition with this new strategy.

Carbon Emissions Reduction

Material Topic: Carbon Emissions Reduction

Supporting the goals of the Paris Agreement by reducing the carbon footprint of our operations, for example by improving energy efficiency and reducing the venting and routine flaring of gas.

Key GRI

- GRI 302: Energy 2016
- GRI 305: Emissions 2016

NaDiVeG

Environmental concerns

Most relevant SDGs



The Carbon Emissions Reduction material topic focuses on reducing the GHG emissions of our operations (Scopes 1 and 2) by way of targeted efforts such as improving energy efficiency, using renewable electricity, modernizing our equipment and processes, and reducing the venting and flaring of gas. These efforts are central to meeting our goal of being carbon neutral in our operations by 2050, which is also enshrined in our HSSE Policy. As part of our new Company strategy, we have set specific interim targets for our short- (2025), medium- (2030), and long-term (2040) targets on the way to meeting our 2050 goals.



Targets 2025

- Reduce carbon intensity of operations¹¹ (Scope 1) by \geq 30% vs. 2010
- Achieve at least 1 mn t of CO₂ reductions in 2020–2025 from operated assets

¹¹ CO₂ equivalent emissions produced to generate a certain business output using the following business-specific metric – E&P: t CO₂ equivalent/toe produced; refineries: t CO₂ equivalent/t throughput (crude and semi-finished products without blended volumes); power: t CO₂ equivalent/MWh produced – consolidated into an OMV Group Carbon Intensity Operations Index, based on weighted average of the business segments' carbon intensity





Target 2030	▶ Reduce absolute Scope 1 and 2 emissions by \ge 30% vs. 2019
Target 2040	▶ Reduce absolute Scope 1 and 2 emissions by \ge 60% vs. 2019
Status 2021	 Carbon intensity of operations reduced by 18% vs. 2010 0.53 mn t CO₂e reduced through concrete emissions reduction initiatives and divestments Scope 1 and 2 emissions reduced by 11% vs. 2019
Relevant SDGs	7 AFFORMATEAND CREATENERS CONTENES CONT
SDG targets:	

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

Effective carbon and energy management helps reduce costs and liabilities. OMV's comprehensive approach to managing GHG emissions encompasses GHG and energy accounting and reporting, inventory management, audits, assessment plans, and training for employees. For instance, in 2020, the OMV internal auditing team performed an audit on GHG accounting to evaluate reporting aspects such as completeness, correctness, reporting processes and methodologies, and quality assurance processes. The result of the audit confirmed that OMV reports emissions in a complete and correct manner, the accounting methodology is in general compliance with international standards, and the reporting process is adequate. A few initiatives for 2021 resulted from the audit, which helped improve the quality of the data even more. In 2021, Borealis set up its first corporate carbon footprint following the Greenhouse Gas Protocol, using 2020 data on Scope 1, 2, and 3 GHG emissions. (For more details, see the Borealis Annual Report.) This allows us to fully integrate Borealis' GHG emissions in our Group carbon footprint and in our reduction targets.

Governance

Ultimate responsibility for Carbon Emissions Reduction lies with OMV's Executive Board. The Chief Executive Officer (CEO) is responsible for overall management and coordination and is therefore responsible for overseeing climate-related issues as well. OMV Executive Board members meet regularly (at least quarterly) to discuss current and upcoming environmental, climate, and energy-related policies and regulations; related developments in the fuels

and gas market; the financial implications of carbon emissions trading obligations; the status of innovation project implementation; and progress on achieving sustainabilityrelated targets. The Executive Board's remuneration is tied to achievement of GHG emission reduction targets (for more information, see Sustainability Governance).

OMV's Supervisory Board also oversees the Carbon Emissions Reduction topic. In 2021, we established a new board committee especially for this purpose. The Sustainability and Transformation Committee was formed to support the Company's Supervisory Board in reviewing and monitoring OMV's sustainability strategy; ESG-related standards, performance, and processes; and specifically the Group's performance in HSSE (Health, Safety, Security, Environment) and climate change.

At Group level, responsibility for GHG accounting and management, sustainability reporting, and ESG governance lies with the Carbon, Energy & ESG Management team in Investor Relations & Sustainability, an area overseen by the CFO. OMV's Carbon, Energy & ESG Management department is responsible for generating OMV's GHG inventory based on international standards and best practice. This ensures a consistent approach across the Group. The main tasks of the team are:

- to define, implement, and manage the OMV carbon • strategy process;
- to monitor, calculate, and report OMV's GHG emissions;
- to define OMV's GHG reporting protocols and tools. •





This team coordinates activities throughout the business, providing guidance to stakeholder groups such as subsidiaries, business units, and assets on GHG and energyrelated topics. There are also dedicated teams at OMV Petrom and Borealis. We provide voluntary trainings to interested employees on GHG monitoring and management, as well as the overall topic of climate change, on OMV's training and learning platform, MyLearning.

Flaring, Venting, and Fugitive Methane Emissions

During oil production, methane gas is produced together with the oil. Much of this gas is utilized. Nevertheless, some of it is routinely flared due to technical or economic constraints, for example. This flaring of gas releases CO₂. In 2017, to reinforce our clear commitment to responsible resource management and sustainable business, we endorsed the World Bank's "Zero routine flaring by 2030" initiative to end routine flaring of associated gas during oil production by 2030. Phasing out routine flaring is one of the essential steps toward combining resource efficiency with long-term economic success and a way to strongly support our efforts to reduce the carbon footprint of our operations. We see financial opportunities in the monetization of hydrocarbon resources by utilizing the previously flared gas and, e.g., selling it. Phasing out routine flaring also enables us to keep our license to operate by improving the environmental and safety situation at the respective production assets and helping us avoid penalties.

Reducing methane emissions from routine/non-routine venting of gas during oil and gas production and processing as well as from gas leaks also contributes to slowing down climate change and provides a valuable mitigation option for climate risk management. Methane is a powerful greenhouse gas. It is the most abundant anthropogenic GHG after CO₂ and second in its overall contribution to climate change. Its greenhouse effect is significantly stronger in the short term, making it more potent than CO₂. In our new climate strategy, we therefore also introduced a target for reducing methane emissions for the first time.

Management and Due Diligence Processes

Routine Flaring and Venting Phase-Out

Around 8% of OMV's total direct GHG emissions and around 34% of OMV's E&P GHG emissions resulted from routine flaring. With expected stricter policies requiring zero routine flaring conditions, OMV has taken initial steps by voluntarily endorsing the World Bank's "Zero routine flaring by 2030" initiative. We report annually to the World Bank on our progress on this initiative. All OMV operations are required to minimize methane emissions from point sources as well as fugitive emissions and technically avoidable emissions (such as well testing and well workover, among others). New production sites are developed with associated gas utilization solutions and without routine flaring. Existing sites, where routine flaring of associated and free gas still takes place, are required to develop a phase-out plan to eliminate legacy routine flaring as soon as possible, but no later than 2030.

In refineries, state-of-the-art plant design is implemented in order to avoid routine flaring by flare gas recovery and balancing the fuel gas system. This type of advanced process control includes sufficient capacity for the flare gas recovery system, the use of high-integrity relief valves, and other economically viable organizational and control measures. All refineries use a flare gas recovery system in order to collect excess gas, which is desulphurized as required, pressurized, and added to the refinery fuel gas system as fuel for the process furnaces. As a result of such measures, we aim to use flaring as a safety system for other than normal operations, such as start-up, shutdown, emergency, process upsets, and others. Especially at Petrobrazi, the capacity for flare gas recovery has been increased in recent years. Emissions of volatile organic compounds (VOCs) are minimized by applying the best available techniques in such areas as hydrocarbon storage and tank sealings according to implementation plans.

Monitoring and Leak Detection and Repair

Fugitive methane emissions and other non-methane volatile organic compounds (NMVOCs) are monitored or estimated and controlled systematically with leak detection and repair programs. Knowing the main potential sources of methane emissions also allows us to implement precautionary measures for preventing such emissions in new production assets. The minimum requirement for identifying leaks is conducting routine audio, visual, and olfactory inspections as part of daily operator rounds at all relevant OMV operating facilities. Leak detection also entails soap-bubble testing and optical gas imaging with defined scopes and intervals (annually or more frequently, as required in accordance with a related risk assessment). At some facilities, infrared cameras are also used for leak detection. Leaks are repaired immediately or within defined time frames, depending on prioritization according to the site's maintenance processes, and based on the risk assessment outcome and other factors like feasibility of repair during operation. In order to prevent as well as to mitigate fugitive emissions, we have taken important steps, including implementing a pipeline integrity program and modernizing facilities such as compressor stations.





2021 Actions

In 2021, we continued to implement leak detection and repair (LDAR) programs to reduce our fugitive emissions.

- At E&P Austria, we set up a LDAR program with optical gas imaging (FLIR camera), ongoing inspection of oil and gas wells and facilities, documentation in an inspection database, and measurement of leakage amounts. This has been implemented at all facilities.
- In Tunisia, a methane emission inventory was defined for the Waha central processing facility to identify all sources and types of methane emissions and unintentional leaks.
- E&P OMV Petrom implemented a LDAR program in all assets as part of Green Kaizen events in 2020. These are intended to minimize and even eliminate the fugitive emissions in selected facilities, while enabling a low-carbon operational behavior among field personnel and local contractors. The Green Kaizen events typically last for five days and get participants actively involved throughout this period. As such, it is a very concentrated form of LDAR, which additionally incorporates before-and-after measurements by an external contractor. These activities aim to raise awareness of the problem among employees and help them understand the scope of the problem, implement a solution, and sustain the result. Building on the experience gained in 2020, OMV Petrom continued the program in 2021 by organizing Green Kaizen events at the Oltenia and Moesia assets.
- In Refining & Marketing (R&M), the Petrobrazi refinery implemented an LDAR Program according to BAT-BREF (Best Available Techniques – Reference Documents). The program's objective is to reduce fugitive emissions from the plant's technological equipment (e.g., vents, flanges). In 2021, the program targeted accessible fugitive emissions sources from tank farm

and aromatic units. The program also covered the screening of inaccessible sources, where no leaks were detected. The measurements were performed by using the Optical Gas Imaging (OGI) method, which involved an advanced hand-held infrared camera specifically developed for this purpose. Of the leakages identified, 84% were fixed. Unit shutdown is required to fix the rest.

We also continued working toward phasing out routine flaring by 2030. A total of 82% of our routine flaring in OMV E&P operations occurs in Yemen. Thus, in order to reduce flaring in Yemen, two gas engines for power generation were commissioned at the central processing facilities in December 2021. The gas engines will support the reduction of flaring, as they will consume gas which was previously flared. They will also replace diesel generators for additional GHG savings.

Outlook

We will continue to phase out routine flaring and venting, and instead look for ways to capture and utilize associated gas. In Tunisia, for instance, we already capture and sell the majority of the associated gas from the Waha field. However, some components of the gas could not be sold previously due to low quality and were routinely flared instead. At the end of 2021, we made the final investment decision on a project that will enable us to capture and sell all parts of the associated gas and thus completely phase out routine flaring. The project consists of recovering excess gas, which is currently routed to the flare, through the installation of three vapor recovering units. In Yemen, two gas engines were commissioned in December 2021. In addition, we will focus on reducing fugitive methane emissions through process optimization, field modernization, and integrity improvement measures in E&P. We continue to define and implement methane leakage, detection, and repair programs in all operated E&P assets.



Target 2025

Targets 2030

- Achieve an E&P methane intensity¹² of 0.2% or lower
- Achieve an E&P methane intensity of 0.1% or lower
- Zero routine flaring and venting of associated gas as soon as possible, no later than 2030





Status 2021	 0.6% methane intensity Volume of gas routinely flared decreased from 462 mn m³ in 2020 to 410 mn m³ in 2021
Relevant SDGs	13 RAMATE

Energy Efficiency and Sourcing Renewable Energy

As an integrated oil, gas, and chemicals company, OMV operates large facilities and is also a major energy consumer. The amount of energy we use creates a significant impact on the environment. Effective management of energy consumption reduces the environmental cost of our operations, increases financial savings thanks to energy efficiency, prevents non-compliance with regulatory requirements on energy use, and mitigates the climate effects of GHG emissions.

Energy efficiency measures therefore have a considerable effect on issues relating to energy consumption of interest to stakeholders:

- Governmental authorities: compliance with EU Emissions Trading System (EU ETS) regulations relating to the submission of emissions allowances within EU ETS; compliance with the EU Energy Efficiency Directive requiring greater energy efficiency in all stages of the energy value chain
- Shareholders and other stakeholders with a direct financial interest in OMV: financial savings resulting from reduced energy consumption, lower production costs, and lower GHG emissions
- NGOs/NPOs: reduced impact of our operations on the environment

Management and Due Diligence Processes

59% of sites are ISO 50001 certified

The OMV Group Environmental Management Standard requires that all OMV businesses and activities use energy responsibly, conserve primary energy resources, and implement energy management plans in accordance with ISO 50001.

Identification of Measures

The potential for reducing energy use is identified in annual campaigns encouraging improved environmental performance, including energy consumption. For example, we have set targets for refineries to reach certain energy index ratings through annual monitoring campaigns. Based on their energy index rating, we identify and assess areas for improvement in energy efficiency. Subsequently, we decide which measures to implement to improve energy consumption as part of our environmental governance process. Borealis makes up 33% of energy consumption in the OMV Group. Borealis has set a target to improve energy efficiency by 20% of the absolute primary energy consumption from a 2015 baseline by 2030. After the acquisition of a majority stake in Borealis, a new initiative to identify and raise joint synergies at the jointly operated Burghausen and Schwechat sites has been established.

Technical Improvements

Energy efficiency measures in OMV operations are closely linked with technical improvements directed at reducing energy use while achieving the same operational output. Process optimization and increasing energy efficiency to save costs and reduce CO_2 emissions are a strong focus of our refineries.



Energy Consumption



One of the internal KPIs which has always been our focus in recent years is the energy efficiency of our refineries. In 2020, the lower throughputs due to COVID-19 also prevented us from running all refineries with the planned energy efficiency. The situation improved in 2021 with recovered throughputs, higher utilization, and therefore a return to better energy efficiency.

In Chemicals & Materials, Borealis' initiatives include energy teams at each production location that drive the location's energy planning process, increase awareness, act as a forum for energy issues, and ensure ISO 50001 compliance. To progress beyond this baseline, all Borealis locations run energy screening programs every four years, often with third-party support, to evaluate their energy performance and identify improvement opportunities. In 2021, to identify ways to improve energy efficiency, Borealis finalized energy screenings in Stenungsund (Sweden) and Porvoo (Finland).

Sourcing Renewable Energy

We are increasingly turning to renewable sources of electricity to power our operations. For instance, in our refineries in Schwechat and Burghausen, electricity contracts stipulate that 50% of purchased electricity must be from renewable sources. Electricity purchased in OMV's Austrian filling stations and head office is already 100% renewable. In Austria, OMV and VERBUND built a groundmounted photovoltaic plant, which produced 11.9 GWh of renewable electricity in 2021. The electricity produced in 2021 covered 9% of the electricity demand of E&P Austria. In Norway, the Gullfaks and Snorre assets, operated by Equinor, are building a floating offshore wind farm called Hywind Tampen, which will supply power to both Gullfaks and Snorre, and reduce their emissions by 200 kt per year. Hywind Tampen will be the world's first floating wind farm to power offshore oil and gas platforms. Eleven floating wind turbines with a total capacity of 88 MW will partly electrify the Gullfaks and Snorre assets in the Norwegian North Sea, offsetting 200 kt of CO2 emissions and 1,000 t of NO_x emissions per year.

2021 Actions

Energy efficiency measures implemented at our three refineries in 2021 make it possible to achieve an annual decrease of more than 22.2 kt CO₂ equivalent and energy savings of 310 TJ. For example, the Petrobrazi refinery continued its digitalization journey to improve energy efficiency by applying operational measures and designing new projects in order to reduce energy consumption. In 2021, Petrobrazi finalized the Energy Monitoring System pilot project at the Atmospheric Distillation Unit. It is designed to monitor energy consumption and energy losses from an operational and design perspective. This project was applied to the pump for the crude oil feed, the crude oil preheat train, and the heat exchangers as well as the atmospheric distillation furnace. The results will be analyzed in 2022.

In Chemicals & Materials, examples of energy efficiency actions taken at Borealis during 2021 included: a furnace revamp in Stenungsund, which delivered an energy performance improvement of 18 GWh primary energy; a reliability improvement program in Geleen (Netherlands), which delivered an energy improvement of 30 GWh primary energy; bypassing a distillation tower in Porvoo, which delivered energy savings of 17 GWh; the start-up of a chemical heat pump in Kallo (Belgium), which delivered primary energy savings of 8 GWh; and implementing advanced process control in ammonia production at Linz (Austria) and Grandpuits (France) to optimize energy consumption, delivering savings of 20 GWh/year for Linz and 20 GWh/year for Grandpuits. At Grandpuits, optimizing the steam network delivered energy savings of 14 GWh/year.

In E&P, key energy efficiency projects included:

- In Tunisia, additional electric and gas meters were installed at the Waha plant to improve energy monitoring in Tunisia, and energy savings tips were implemented for the Waha camp (e.g., in areas of significant energy use such as cabins, laundry, the kitchen, and restaurant).
- In Norway, a low-emission hybrid jackup rig was used for drilling in the Ommadawn exploration well. A battery package was installed on the rig to reduce diesel consumption and a catalyst to reduce NO_x emissions. As a result, CO₂ emissions were reduced by 57% (from 3,232 to 1,382 t per 30 days) and NO_x emissions were reduced by 78% (from 48 to 2 t per 30 days) as compared to 2020 operations.
- In E&P OMV Petrom, we automated the oil piston pumps at Suplac Park at the Crişana asset. The energy savings resulted from changing the continuous operating regime to operating only when necessary, according to level radars in the oil decanter. Another initiative was the optimization of gas delivery from



Bărbuncești station, Moldova asset, by adjusting the compressor regime to the needs of the consumers, which in 2021 mainly comprised the nearby local community. With this adjustment, the gas from the stage 2 compressors now has the required delivery pressure and only needs to go through the new drying station to ensure the gas is of the required quality before being delivered. The four stage 3 compressors were therefore used to a lesser extent, resulting in energy savings.

We also undertook energy saving measures at our offices. At Petrom City, conventional lighting was replaced with LED technology, for instance. This project will continue through 2022.

In addition, we continued to scale up our sourcing of renewable electricity. In 2021, Borealis installed its first solar photovoltaic rooftop array generating electricity for production purposes at the Borealis plant in Monza (Italy). The company has also signed long-term renewable energy supply deals for its assets in Sweden and Belgium.

Outlook

We will continue to identify measures to improve energy efficiency, and take the following actions in the coming years:

 OMV Tunisia will conduct a regulatory energy audit for the Waha central processing facility and the Nawara central processing facility to assess current consumption and identify potential areas for improvement and energy reduction.

- In Norway, we will continue with the same focus on reducing diesel use with hybrid jackup rigs in 2022. These rigs are provided with battery packages which reduce the use of diesel by approximately 15 to 20 t per day, which also translates to reduced emissions. In addition, a NO_x catalyst has been installed, reducing NO_x emissions by approximately 80%.
- In E&P OMV Petrom, we will improve energy efficiency in 2022 by optimizing the natural gas production system at the Moldova asset. Three engines from the Comănești combined heat power (CHP) plant will be relocated to the Albotești warehouse and Park 2 Văsiești to produce electricity and heat. Consequently, the old hot water and steam boilers will be shut down. In 2022, we also plan to modernize the Bărbuncești compressor station at the Moldova asset. The twelve old XOB compressors will be replaced with three new screw compressors and frequency converters.
- At the Schwechat refinery, further optimization will be achieved with a dynamic matrix control for a waste heat recovery system to allow additional utilization of approximately 2.5 MW of waste heat. This will help increase the amount of the refinery's waste heat channeled into Vienna's district heating system and Vienna International Airport, where an additional significant increase of GHG-free energy support is planned for 2022.

We will continue to increase our sourcing of renewable energy to power our operations. In Chemicals & Materials, the business purchasing the greatest amount of energy, our aim is to have all energy purchased be renewable by 2030.

Energy Transition

Material Topic: Energy Transition

Supporting the goals of the Paris Agreement by reducing the carbon footprint of our energy supply, specifically by increasing sales of zero-carbon energy products such as renewable mobility fuels and renewable power.

Key GRI

GRI 305: Emissions 2016

NaDiVeG

Environmental concerns

Most relevant SDGs





GHG Scope 3 Emissions from Products¹³



We are aware that the vast majority of our emissions comes from the use of our products. As an oil, gas, and chemicals company, we have a unique responsibility in this regard. About 79% of OMV's products are currently directly used for combustion, significantly contributing to global climate change. The Energy Transition material topic focuses on reducing the carbon footprint of our energy supply, specifically through increasing sales of zero-carbon energy products such as renewable mobility fuels and renewable power. This is the centerpiece of OMV's commitment to support and accelerate the energy transition and become a net-zero business by 2050 or sooner.

To concretize our 2050 goals, we have set mid- and long-term targets to reduce our absolute Scope 3 emissions by at least

20% by 2030 and by at least 50% by 2040, both against the baseline year 2019. In addition, we intend to reduce the carbon intensity of the energy supply by at least 20% by 2030 and by at least 50% by 2040, both against the baseline year 2019.

The scale-up of zero-carbon energy product sales while decreasing fossil fuel sales is central to OMV's climate strategy.

In Exploration & Production, we are working to expand our photovoltaic asset base, including exploring battery and storage options. Based on our subsurface knowledge, capabilities, and asset base, we are also exploring carbon capture and storage (CCS) solutions. We collaborate on these activities in line with applicable regulatory and legal requirements in conjunction with industry and research partners. We are also investigating solutions for subsurface energy storage, e.g., with hydrogen or compressed air. Furthermore, we are looking at options to explore and commercially develop the geothermal energy potential in the countries where we operate. These projects are in the R&D or initial investment phase. By 2030, we plan to build our renewable energy production to around 10 TWh (including geothermal, photovoltaic, wind), and develop CCS storage capacity of around 5 mn t per year CO₂ net to OMV by 2030.

In Refining, we primarily focus on finding solutions for hardto-electrify market segments, such as heavy road transportation and air travel, as well as providing feedstock for greener chemical production. Overall, we plan to grow production of renewable mobility fuels and sustainable chemical feedstocks to approximately 1.5 mn t, and produce and market at least 700 kt of sustainable aviation fuels per year by 2030.



¹³ Includes Scope 3, Category 10: Processing of sold products, and Scope 3, Category 11: Use of sold products

¹⁴ The following Scope 3 categories are included: Category 11: Use of Sold Products for OMV's energy segment, Category 1: Purchased Goods (feedstocks) from OMV's non-energy business segment, and Category 12: End-of-Life of Sold Products for OMV's non-energy segment.





Status 2021 Carbon intensity of product portfolio reduced by 5% vs. 2010 Absolute Scope 3 emissions increased by 2% vs. 2019 Carbon intensity of energy supply reduced by 2.8% vs. 2019 **Relevant SDGs**

SDG targets:

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

7.3 By 2030, double the global rate of improvement in energy efficiency

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

In this material topic, we focus on reducing the carbon footprint of our energy supply. However, our circular economy solutions also play a central role in our climate and carbon footprint reduction strategy. (Read more about our efforts on this topic in Circular Economy.)

Governance

OMV's energy transition strategy is the cornerstone of our Group's business strategy. Our sustainability framework and net-zero goal were the basis for developing the business strategy approved by the Executive and Supervisory Boards in December 2021. The Group's decarbonization strategy is overseen by Carbon, Energy & ESG Management and Strategic Planning & Projects.

Our climate ambitions are at the heart of our strategy, and responsibility for meeting these ambitions is embedded at the highest levels. Our Executive Board is in charge of setting our climate targets and ensuring that our Group's business strategy is aligned with meeting those targets. Correspondingly, meeting our climate change targets is a part of exec-

Zero-Carbon Products

The scale-up of zero-carbon product sales while reducing fossil fuel sales is central to reducing the carbon footprint of our energy supply. Zero-carbon products include biofuels, power, mature renewable energy technologies such as e-mobility offerings, as well as new energy products. For instance, we contribute to the creation of a sustainable energy system with a dedicated team of interdisciplinary experts in Refining & Marketing who identify and mature solutions with a strong focus on hard-to-battery-electrify markets and customer segments, such as heavy road transport or air travel. What these markets have in common is that they need an energy-dense yet climate-

utive remuneration, with GHG reduction targets included in the LTIP and in the annual bonus paid to the Executive Board. (Read more in Sustainability Governance.)

The responsibility for our role in the energy transition is also entrenched at Supervisory Board level. In 2021, we instituted a new committee, the Sustainability and Transformation Committee. The purpose of this committee is to support the Company's Supervisory Board in reviewing and monitoring OMV's sustainability strategy; ESG-related standards, performance, and processes; and specifically our performance in HSSE and climate change. Furthermore, the committee serves to support and oversee the transformation process toward a more sustainable business model, including the cultural integration of strategically significant acquisitions.

Low- and zero-carbon products enabling the energy transition are developed in the business units. Support for carbon impact assessments for new products is provided at Group level by the Corporate Carbon, Energy & ESG Management department.

friendly fuel with the lowest possible downtime. The successful implementation of these projects will reduce emissions and create green, innovative products and services for society as well as provide a key differentiator for OMV.

Management and Due Diligence Processes

Responsible Biofuels Sourcing

All biofuels purchased by OMV in 2021 and used for blending meet the requirements of the EU's Renewable Energy Directive (2009/28/EC). Since 2013, the ISCC-EU certificate issued for OMV Downstream GmbH has been





renewed on an annual basis. OMV Petrom, OMV Hungary, OMV Czech Republic, and OMV Slovenia are also certified according to the ISCC-EU standard.

OMV purchases biodiesel (FAME) mainly from European producers that use very little palm oil. In 2021, of all biofuels placed on the market by OMV only around 2% were based on palm oil. Certain biofuels are almost exclusively available with palm oil as the feedstock. However, ISCC standards require that no deforestation takes place from January 2008 onward for any feedstock that is used for biodiesel generation. As of July 2021, OMV has also complied with the Austrian legal requirement to eliminate palm-oil-based biofuels completely.

We plan to increase the use of regional rapeseed oil and used cooking oil as well as other potential waste and advanced feedstock, which is made possible using our Co-Processing technology. Co-Processing involves introducing biogenic feedstock during the fuel refining process instead of the conventional method of blending biogenic components into fuel after production. This concept allows OMV's existing refineries to produce transportation fuels from various types of biogenic feedstock, such as domestic rapeseed oil, sunflower oil, used cooking oil, or future advanced oils. Utilizing this process leads to an annual reduction in OMV's carbon footprint of up to 360 kt of CO₂.

In 2016 and 2017, OMV successfully conducted the first field trials of Co-Processing at the Schwechat refinery using rapeseed oil and obtained certification in accordance with the REDcert standard, an EU-recognized system for the certification of sustainable biomass. In 2020, another field trial was successfully completed at the Petrobrazi refinery. OMV continues to implement the Co-Processing technology, and by 2023, the Company aims to co-process approximately 200 kt of sustainable feedstock per year, depending on future legislation. It is important to note that there will not be any palm oil being co-processed. The project will start with a mix of vegetable oils (rapeseed oil and sunflower oil). It may include some other waste and residue streams, like used cooking oil, later on (2024-2025), if not from the very beginning. In December 2020, OMV committed to investing EUR 200 mn in the construction of a Co-Processing unit at the Schwechat refinery.

Selection of Projects

In Refining & Marketing, the New Business Implementation team identifies and matures solutions with a strong focus on hard-to-battery-electrify markets and customer segments. The portfolio focuses on advanced biofuels, hydrogen, and e-fuels, as these offer the potential to utilize synergies with existing refinery assets and competences for a feasible scale-up of green technologies. The minimum GHG reduction for a "green" project is defined by the regulatory requirements, such as the Renewable Energy Directive. All project ideas selected for maturing within these focus areas need to demonstrate a feasible trajectory from pilot and demo stage to full industrial scale in the medium term.

2021 Actions

Biofuels and Co-Processing

The following key activities were carried out across the Group in 2021:

- OMV and Austrian Airlines agreed on the production and fueling of 1,500 t of sustainable aviation fuel (SAF) in 2022. The sustainable fuel is produced at the Schwechat refinery by co-processing used Austrian cooking oil. The use of 1,500 t of SAF by Austrian Airlines will prevent emissions of around 3,750 t of CO₂. This compares to the CO₂ emissions of 333 Vienna-to-London flights with a typical short- to medium-haul AUA aircraft (Airbus A320).
- OMV launched OMV EcoMotion Diesel. This product contains up to 33% renewable components consisting of no more than 6.9% of FAME (fatty acid methyl ester) and about 26.1% of HVO (hydrotreated vegetable oil). With this large share of bio-components and through CO₂ offsetting of the remaining share, this 100% carbon-neutral diesel is the first of its kind in Austria. The conventional CO₂ share of OMV Eco-Motion Diesel is offset in conjunction with Climate-Partner to support internationally recognized projects. (Read more in <u>Neutralization Measures</u>.) With 33% renewable content, OMV EcoMotion Diesel reduces greenhouse gas emissions by at least 20% to 25% compared to purely fossil-based diesel.

Biofuel Volumes¹⁵



Glycerin2Propanol

Using a patented process developed in-house, OMV made the final investment decision in 2021 to build a pilot plant at the Schwechat refinery that will produce second-generation biofuels from 2023. The plant involves advanced bio-

¹⁵ 2020 figure restated and 2021 figure estimated as both Austria and Germany data are based on year-to-date actuals plus a forecast for the remaining months each year, given that the annual deadline for closing all biofuel balances of a given year is not before the publication of the Sustainability Report.



fuels that are not in competition with foodstuffs. A typical refining process will see the waste-based substance glycerin turned into bio-alcohol, which when added to gasoline reduces its CO₂ footprint. The plant will use a catalyst, or reaction accelerator, developed in-house by OMV, to produce propanol (an alcohol) from glycerin. Glycerin is a byproduct or waste product from the production of biodiesel, as well as the manufacture of detergents and soaps, but it is also considered an advanced feedstock under the European Union's RED II (Renewable Energy Directive). The propanol produced in this way will then be used as a bio-additive for gasoline. It can also be used as a sustainable feedstock for the chemical market as a replacement for fossil-based propanol. OMV is set to invest around EUR 30 mn in this project. Of this, around EUR 6.9 mn will come from the Austrian Research Promotion Agency (FFG). Another source of funding is the COVID-19 premium.

The Glycerin2Propanol pilot plant will be built at the Schwechat refinery alongside the ReOil[®] plant so that both units can utilize a single measuring station, exploiting synergy effects through a shared-operator concept. The Glycerin2Propanol pilot plant is expected to be operational in 2023. The capacity of the pilot plant will be 1.25 mn l of propanol per year. This will lead to a CO₂ reduction of around 1,800 t annually. A total of 1.2 l of crude glycerin is needed to produce 1 l of propanol. Under moderate temperature and pressure, 1 barrel (= 159 liters) of propanol will be produced per hour in an energy-efficient process. The long-term plan is to commercialize the technology in order to produce around 125 mn l of propanol per year and reduce CO₂ emissions by around 180 kt.

Besides this unique in-house development, we also partner with technology providers to develop viable business projects for transforming biomass from agriculture, municipalities, the paper industry, or wood processing into bioliquids to be used for greener fuels and chemicals.

Hydrogen

The following key activities were carried out across the Group in 2021:

Together with our partner Kommunalkredit Austria AG, in February 2021, we announced a joint investment in the construction of Austria's largest electrolysis plant at our Schwechat refinery. Total investment will be around EUR 25 mn, with OMV and Kommunalkredit each bearing half the cost. The plant is expected to go live in the second half of 2023. The 10 MW PEM (polymer electrolyte membrane) electrolysis system will produce up to 1,500 t of green hydrogen per year. The green hydrogen will be used to hydrogenate biobased and fossil fuels, substituting grey hydrogen in the refinery. This would reduce OMV's carbon footprint by up to 15 kt of fossil CO₂ annually. The second step of the UpHy project will be to use the green hydrogen for decarbonizing "hard-to-electrify" transportation segments like buses and trucks. OMV aims to build a new H₂ filling station for buses and heavy-duty vehicles close to Vienna. This is the first project of its kind in Europe and aims to not only lower production costs but also to demonstrate the lowest downtimes and highest plant availability for commercial use in industry and mobility. In addition to the electrolysis system, OMV will build the entire value chain, including H₂ trailer loading, trailer logistics (using 300 bar trailers in Austria for the first time), and a high-availability, energy-optimized bus fueling station. One of the goals is to supply the first commercial H₂ bus line in Europe.

To help create the conditions for the mass-market rollout of hydrogen trucks in Europe, the H2Accelerate initiative, a consortium consisting of OMV, Shell, Daimler Truck AG, IVECO, and the Volvo Group was formed in 2020. In 2021, TotalEnergies and Linde joined the consortium. A large-scale roll-out of hydrogen-fueled trucks is expected to create new industries: zero-carbon hydrogen production facilities, large-scale hydrogen distribution systems, a network of high-capacity refueling stations for liquid and gaseous hydrogen, and production of the hydrogenfueled trucks themselves. The decade-long scale-up is expected to begin with groups of customers willing to make an early commitment to hydrogen-based trucking. These fleets are expected to operate in regional clusters and along European high-capacity corridors with good refueling station coverage. During the next decade, these clusters can then be interconnected to build a truly pan-European network.

Sustainable Aviation Fuels

The third focus topic in the hard-to-electrify area – e-fuels – is the core building block of OMV's Sustainable Aviation Fuel (SAF) portfolio and shows great potential for enabling climate-friendly air travel. Although the basic concept is simple – hydrogen produced with renewable electricity is combined with CO_2 – the production technology is still in the demonstration phase and requires further research and development for the required industrial scaling.

OMV works to mature this technology by engaging in various initiatives to demonstrate the large-scale industrial production of syngas (CO+H₂) via co-electrolysis of CO₂ and water. Syngas is the precursor for producing green fuels or other chemicals in a Power-to-X process. For instance, as leader of the Clean Tech Aviation consortium, we are assessing the feasibility of building an industrial plant for synthetic kerosene in Bavaria (Germany). A letter of intent was signed at the Bavarian Ministry of Economic Affairs and Energy (StMWi) in October 2021. This power-to-





liquid plant is intended to be scalable and will start with a capacity of around 50 kt of renewable jet fuel per year. In addition to the StMWi and OMV Germany, the letter of intent was signed by a broad range of companies and institutions: Siemens Energy, MTU Aero Engines, MAN Energy Solutions, Lufthansa, Munich Airport, CAPHENIA, Bauhaus Luftfahrt, Reallabor Burghausen as well as the Technical University of Munich (Straubing Campus), and the German Aerospace Center (DLR).

Outlook

In the coming years, we will focus on implementing announced investment projects (e.g., UpHy and Glycerin2Propanol), and maturing project ideas in the areas of advanced biofuels and e-fuels. By 2030, we aim to produce and market at least 700 kt of sustainable aviation fuels yearly. OMV will also expand its capabilities to take advantage of the growth in e-vehicle charging. By investing more than EUR 400 mn by 2030, OMV will offer more than 2,000 e-charging points by 2030 at highway and transit route filling stations, plus around 17,000 office wallbox charging points by 2030.



Neutralization Measures

We aim to reduce our carbon footprint to net zero by 2050 at the latest. While the biggest drivers on this journey will be decreasing our fossil fuel sales and increasing our zerocarbon product sales, we also recognize that neutralization measures, such as CCS/U or voluntary offsetting, will be necessary. By 2030, we aim to establish CCS capacities of around 5 mn t per year as our main neutralization measure toward achieving our targets. We will minimize the use of carbon credits for voluntary offsets as a contributor toward achieving our GHG reduction target. This is to ensure that we are not simply buying our way out of our responsibility to act on climate change and the energy transition.

Management and Due Diligence Processes

Offsetting Emissions

OMV's customers can offset the carbon footprint resulting from using all products they purchase from us – diesel, gasoline, bitumen, heating oil, natural gas. OMV Gas offers this service in the Netherlands, Belgium, Germany, Austria, and Hungary. We recognize high and ever-increasing customer demand for this option. OMV Fuels Sales customers can offset their carbon footprint based on the use of gasoline or diesel, as well as extra-light heating oil and bitumen, in all countries where we operate. Customers of OMV Retail Mobility & Convenience (our filling stations) are able to offset their carbon footprint from gasoline and diesel by using loyalty points in Slovenia or the jö Bonus Club card in Austria. Our OMV Card customers can use their OMV Card with the Routex function to offset the carbon footprint of the diesel and gasoline they purchase.

OMV works closely with ClimatePartner, an internationally trusted service partner based in Munich. ClimatePartner selects certified carbon-offset projects and ensures that OMV customers who use this option are able to contribute a dedicated amount to these projects. We have defined a

¹⁶ On December 14, 2020, OMV and EG Group reached an agreement for the acquisition of 285 filling stations in Germany by EG Group. The transaction is subject to required regulatory approvals and the closing is expected in 2022. On February 4, 2021, OMV announced its intention to sell its business in Slovenia, including around 120 filling stations. The closing of this transaction is also expected in 2022. As both transactions were not completed by the end of 2021, these filling stations are still displayed in the graphic.





rigorous set of criteria and standards for the selection of climate protection projects to ensure optimal verification of emissions offsetting. For instance, the technologies we selected for climate protection in our projects are wind power and forest protection. Climate protection projects are verified according to the internationally recognized standards for voluntary emissions reduction: the Verified Carbon Standard (VCS) and the Gold Standard (GS). In 2021, verified emissions offset by customers totaled 115.7 kt CO₂e.

Carbon Capture and Storage (CCS) and Utilization (CCU)

OMV aims to capture CO₂ and ideally use it as a resource. Carbon capture and utilization technologies, such as capturing CO₂ emissions from our refineries, hydrating the CO₂, and then reusing it as fuel, are crucial to reducing overall atmospheric emissions and fostering circularity. However, achieving the goals of the Paris Agreement does not just require reducing our own emissions but also helping reduce atmospheric emissions from other sources. Thus, our CCS and CCU projects include, but are not limited to, capturing our own emissions. A key example of developing such projects with industry partners to reduce overall atmospheric emissions is the C2PAT project.

C2PAT, a joint project between Lafarge, VERBUND, OMV, and Borealis, aims to demonstrate a novel cross-sectoral carbon value chain at industrial scale. Industrial CO2 released during cement production is captured (10 kt per year for demo plant) and transformed with green hydrogen into feedstock for a variety of renewable-based chemicals and value-added plastic products. The overall system is based on the integration and joint operation of various technologies that will be combined into one unique, holistic value chain. A facility cluster will comprise a carbon capture unit, a water electrolysis unit for the production of green hydrogen, and a new synthesis route via reverse water-gas shift reaction and Fischer-Tropsch synthesis located at the site of Lafarge's cement plant in Mannersdorf. Intermediates will be processed into olefins and ultimately renewable-based value-added plastics at OMV and Borealis sites.

By demonstrating the feasibility of this technology, C2PAT will refine innovative operational and business models to

develop a scale-up concept for the carbon value chain. The key innovation is using CO2 emissions from cement production as a feedstock for petrochemicals - an integrated and cross-sectoral approach that has never been demonstrated before. C2PAT also demonstrates a circular economy approach in the cement and chemical sector given that renewable-based plastics can be reused and recycled in various recycling streams. C2PAT will explore the market potential for renewable-based products, and develop models for control as well as for holistically optimizing the overall value chain. Experience from the demo plant will be used to scale up the process. The next step would be a full-scale plant capable of converting more than 700 kt of CO2 per year into renewable-based products. In the current initial phase, based on a co-signed MoU, the partners are evaluating and developing a joint strategy for project development and funding opportunities, business modeling and process engineering.

2021 Actions

In 2021, we worked on innovative solutions to utilize captured CO₂. For instance, shoe company On has partnered with Borealis and LanzaTech to create CleanCloud™, a sustainability initiative using carbon emissions to create foam for running shoes. On is the first company in the footwear industry to explore carbon emissions as a primary raw material for a shoe bottom unit, as part of its move away from petroleum-based resources. Technology from LanzaTech captures carbon monoxide emitted from industrial sources such as steel mills or from landfill sites. Once captured, these emissions enter a patented fermentation process, which converts the carbon-rich gas to liquid ethanol using specially selected bacteria. The ethanol is then dehydrated to create ethylene, which Borealis polymerizes to become EVA (a copolymer of ethylene vinyl acetate), the versatile and lightweight material that On starts working with to create a performance foam for shoes.

Outlook

As part of our strategy, we foresee developing CCS storage capacity of around 5 mn t per year CO_2 net to OMV by 2030; 2 mn t per year will be in OMV Petrom. We will continue to explore CCU possibilities.