Climate Change

The OMV Group clearly recognizes that climate change is one of the most important global challenges today and fully supports the goals set forth by the Paris Agreement. By 2050, OMV aims to transform into a net zero business.[6]

In 2022, OMV has set out a roadmap with concrete interim short-, medium-, 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 greenhouse gas (GHG) emissions in Scopes 1, 2, and 3 by 2050. For Scopes 1 and 2, OMV is aiming for an absolute reduction of 30% by 2030 and of 60% by 2040. For Scope 3, from our product portfolio and other material Scope 3 emissions, OMV is striving for a reduction of at least 20% by 2030 and of 50% by 2040. These absolute GHG emission reductions and the increase of zero-carbon product energy sales are the key to reducing the carbon intensity of our energy supply, pursuing 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 by 2050 Scenario (NZE).

To achieve these targets, OMV takes climate action in its operations, product and service portfolio, circular economy activities, innovations and R&D activities, working environment, and social investments. There is no silver bullet for tackling climate change. Reaching our targets for 2030 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 around 350 kboe/d and cut crude distillation throughput by 2.6 mn t.
- An increase in zero-carbon product 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 the recycling of polyolefins and sustainable feedstocks: We will deliver approximately 2 mn t/year of circular products, that is, polyolefins manufactured from recycle or biogenic feedstock rather than fossil sources.
- Improved energy and operational efficiency, and zero routine flaring and venting, thereby reducing methane emissions.
- All energy purchases in the C&M segment will be 100% renewable. In 2022, electricity purchased by C&M accounted for 11.8 PJ – approximately 74% of OMV's total electricity purchased.

In addition to these efforts, neutralization measures such as Carbon Capture and Storage (CCS) will be necessary. OMV anticipates that it will develop around 5 mn t per year of CCS capacity across all business units until 2030. OMV aims to support and accelerate the energy transition with this new strategy.

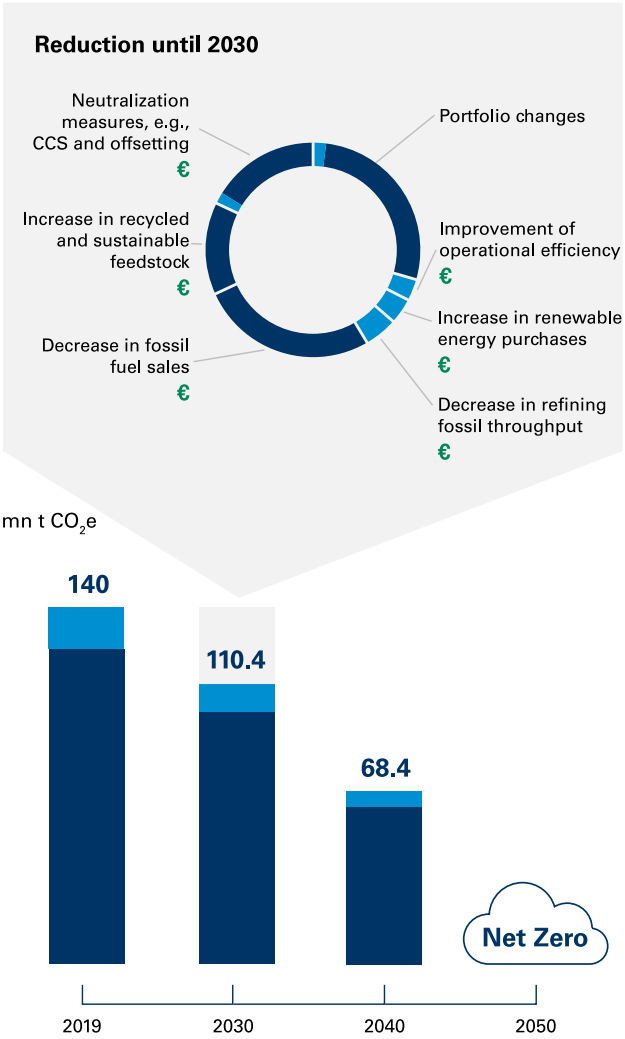
[6] The commitment "net zero business by 2050" covers the greenhouse gas (GHG) emissions of our operations (Scopes 1 and 2), and our product portfolio and other Scope 3 emissions along the value chain. For our interim GHG targets for 2030 and 2040, Scopes 1 and 2 and the following Scope 3 categories 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.

CAPEX Allocated for Decarbonization Measures to Meet OMV's 2030 Climate Targets

Absolute Emissions

Target: Reduce Scopes 1 & 2 by ≥30% and Scope 3 by ≥20% vs. 2019

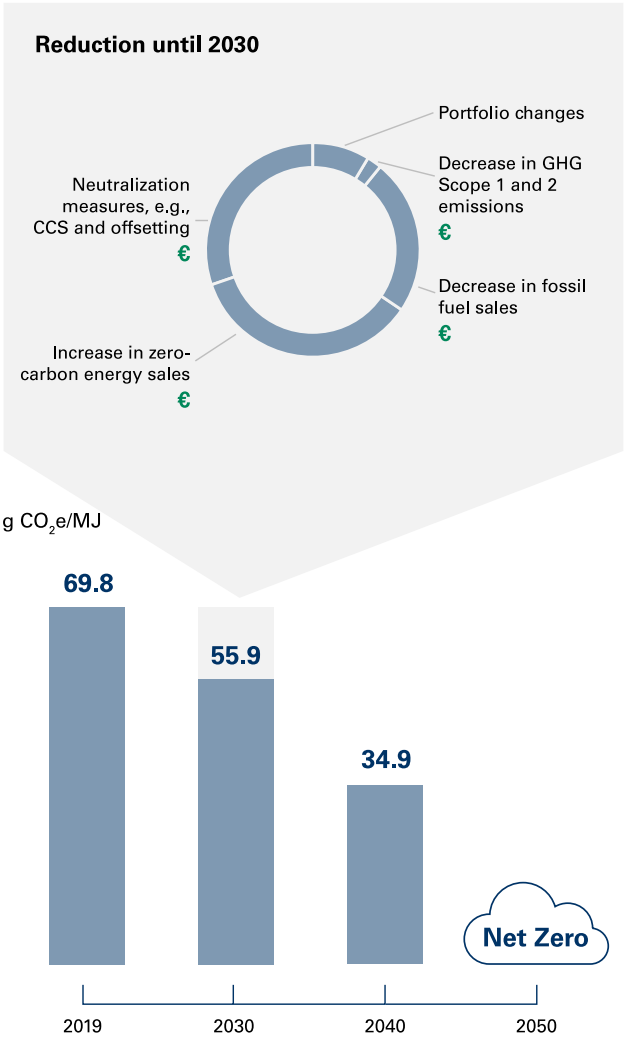
SCOPES 1 & 2 SCOPE 3 € Allocated CAPEX



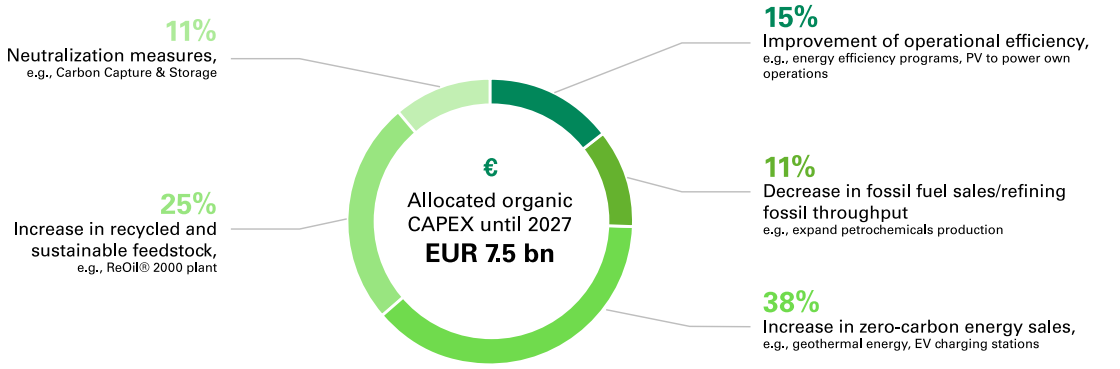
Carbon Intensity of Energy Supply

Target: Reduce carbon intensity of energy supply by ≥20% vs. 2019

SCOPES 1, 2 & 3 € Allocated CAPEX



EUR 13 bn organic CAPEX Planned Until 2030 to Achieve Climate Targets



Around two thirds of planned sustainability CAPEX in the next five years will go to recycled and sustainable feedstock and zero-carbon products.

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 GRIs

- 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) through targeted efforts such as improving energy efficiency, increased use of renewable electricity, modernizing our equipment and processes, and reducing venting and flaring of gas. These efforts are integral to meeting our goal of becoming carbon neutral in our operations by 2050, which is also incorporated into our HSSE Policy. As part of our Strategy 2030, we have set specific interim targets for the short (2025), medium (2030), and long term (2040) on the path to meeting our 2050 goals.

Targets 2025	▸ Reduce carbon intensity of operations[7] (Scope 1) ≥30% vs. 2010 ▸ Achieve at least 1 mn t of CO_2 reductions in 2020–2025 from operated assets
Target 2030	▸ Reduce absolute Scope 1 and 2 emissions by ≥30% vs. 2019
Target 2040	▸ Reduce absolute Scope 1 and 2 emissions by ≥60% vs. 2019

[7] CO_2 equivalent emissions produced to generate a certain business output using the following business-specific metrics – E&P: t CO_2 equivalent/toe produced; refineries: t CO_2 equivalent/t throughput (crude and semi-finished products without blended volumes); power: t CO_2 equivalent/MWh produced – consolidated into an OMV Group Carbon Intensity Index, based on weighted average of the business segments' carbon intensity

Status 2022

- Carbon intensity of operations reduced by 17% vs. 2010
- 0.64 mn t of CO_2e reduced through concrete emissions reduction initiatives and divestments vs. 2020
- Scope 1 and 2 emissions reduced by 23% vs. 2019

Most 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

Effective carbon and energy management helps reduce costs and liabilities. The OMV Group's comprehensive approach to managing GHG emissions encompasses GHG and energy accounting and reporting, inventory management, audits, assessment plans, and training for employees. An audit conducted by the internal auditing team in 2020 on the completeness, correctness, reporting processes and methodologies, and quality assurance processes of our GHG accounting confirmed that the OMV Group reports Scope 1, 2, and 3 emissions in a complete and correct manner, that the accounting methodology complies with international standards, and that the reporting process is adequate.

In 2022, the Corporate Carbon, Energy & ESG Management team continued to conduct on-site audits of GHG accounting to verify and improve transparency. This included a detailed assessment of the process of collecting data, the process of managing the data (measurement, estimations, assumptions, calculations, forecasts, consolidation, etc.), and the process of internal and external data communications. The audits confirmed the good practices already in place and highlighted some potential areas for improvement. For all findings and non-conformities, respective action plans are being defined and tracked for close-out in OMV's HSSE reporting tool.

Governance

Ultimate responsibility for reducing carbon emissions lies with OMV's Executive Board. The Chief Executive Officer (CEO) is responsible for the overall management and coordination and is therefore also responsible for overseeing climate-related issues. 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 climate targets. The Executive Board's remuneration is linked to the achievement of our GHG emissions 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 OMV's carbon strategy process,
- To monitor, calculate, and report OMV's GHG emissions, and
- to define OMV's GHG reporting protocols and tools.

The team coordinates activities throughout the business, providing guidance to stakeholder groups such as subsidiaries, business units, and assets on GHG and energy-related topics. To ensure consistency across the Group, there are also dedicated teams in OMV Petrom and Borealis. Tailored voluntary training on GHG accounting, monitoring and management, sustainability, and climate change is developed by the experts in the Carbon, Energy & ESG Management team and offered to interested employees Group-wide.

In 2022, OMV updated its Capital Allocation Framework and introduced the new project category "Sustainability Projects" which are allowed to meet less stringent economic return requirements. The Carbon, Energy & ESG Management team developed a new strategic climate scoring methodology for Group-wide investment projects. The impact of investments on OMV's decarbonization strategy is now taken into account. Alongside other strategic scoring aspects, this allows for holistic portfolio optimization across the OMV Group to support the achievement of our GHG reduction targets (for more information, see Sustainability Governance).

In 2022, the team also developed a Group-wide GHG Management Framework. This is the new OMV Group regulation that defines how to measure, report, and manage greenhouse gas emissions and contains the definitions, boundaries, and rules for the OMV Group's strategic GHG reduction targets and "net zero by 2050" ambition. It also defines the requirements for purchasing voluntary carbon offsets and their contribution to achieving the Group's GHG target. The regulation also introduced new requirements for Scope 1 E&P methane emissions accounting, which will align with the Oil & Gas Methane Partnership 2.0 (OGMP 2.0) Framework as a minimum and require E&P-operated source-level measurement of methane emissions (OGMP 2.0 level 4) by 2026.

Flaring, Venting, and Fugitive Methane Emissions

During oil production, associated gas is produced together with the oil. While much of this gas is utilized, some of it is routinely flared due to technical or economic constraints, resulting in the release of greenhouse gases such as CO_2 and methane. 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 an essential step in combining resource efficiency with long-term economic success, as well as a way of supporting the decarbonization of our operations. We see financial opportunities in the monetization of hydrocarbon resources by utilizing the previously flared gas and/or selling it. Phasing out routine flaring improves the environmental and safety conditions at our respective assets, thereby enabling us to not only maintain our license to operate but also avoid any penalties.

Reducing methane emissions from the 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 CO_2 and second in its overall contribution to climate change. Its greenhouse effect is significantly stronger in the short term, making it more potent than CO_2. In our new climate strategy, we therefore also introduced a target for reducing methane emissions for the first time.

Management and Due Diligence Processes

Phasing Out Routine Flaring and Venting

Around 5% of OMV's total direct GHG emissions and around 24% of OMV's E&P GHG emissions result from routine flaring. With stricter policies requiring zero routine flaring expected, OMV has taken initial steps toward compliance by voluntarily endorsing the World Bank's "Zero routine flaring by 2030" initiative. We report to the World Bank on our progress on this initiative annually. 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 the appropriate gas utilization solutions in place and without routine flaring. Existing sites, where routine flaring of associated and free gas still occurs, are required to develop a phase-out plan to eliminate legacy routine flaring as soon as possible, but no later than 2030.

In our refineries, state-of-the-art plant design is implemented to avoid routine flaring, for example through the use of flare gas recovery and balancing the fuel gas systems. 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 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 during unplanned operations, which include start-up, shutdown, emergency, process upsets, and others. At the Petrobrazi refinery in particular, the capacity for flare gas recovery has been increased over the past few years. Emissions of volatile organic compounds (VOCs) are minimized by applying the best available techniques (BATs) in such areas as hydrocarbon storage and tank seals according to implementation plans.

Fugitive Emissions 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 (LDAR) programs. Knowing the main potential sources of methane emissions also allows us to implement precautionary measures for preventing such emissions at 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 corresponding risk assessment). At some facilities, infrared cameras are also used for leak detection. We also collaborate with third parties to further enhance state-of-the-art methane monitoring with technologies such as drones, satellite data, and acoustic leak imaging.

Leaks are repaired immediately or within defined time frames and, depending on prioritization, according to the site's maintenance processes. These are based on the risk assessment outcomes and other factors including feasibility of repair during operation. To prevent and mitigate fugitive emissions, we have taken important steps, including implementing a pipeline integrity program and modernizing facilities such as compressor stations.

2022 Actions

Decarbonization Initiatives

- At our Māui Platform A in New Zealand, the low-pressure produced water (PW) system is designed to vent produced water flash gas into the atmosphere. The produced water disposal route has now been changed to reinject the water straight down the reinjection well. This reduces flash gas dispersal into the atmosphere. This scheme also reduces flare gas from the blanket gas on the PW separators, and reduces the power demand (i.e., fuel gas consumption) associated with the PW transfer pumps. These modifications were implemented on the site in July 2022 and save approx. 800 t CO_2/year.
- In Tunisia, a few modifications and updates were made at the Waha Central Processing Facility to continue the phase-out of routine flaring and venting. These included the installation of a chilling unit to comply with Nawara pipeline gas specifications and enable the routing of Waha gas to the Nawara pipeline during upsets or gas export limitations being imposed on Waha clients' facilities. In the past, whenever such situations were faced, the Waha dry gas was totally or partially flared, but that is no longer the case. In addition, the settings of the vapor recovery units (VRUs) were finetuned to handle additional gas volume and slugs. This ensures that more associated gas is recovered by rerouting it to the VRU and then to the gas lift manifold, instead of flaring it. Furthermore, the installation of harmonic filters in the AGP (Anaguid Gathering Point/Plant) has been completed and improved the quality and stability of the power network, allowing the AGP to be fed by the main power generator and improving the energy efficiency of the overall system. For Waha alone, an approx. 50% reduction in flared gas was achieved through the above-mentioned improvements.
- In Austria, a zero-emissions project was implemented at the Bad Pirawarth asset. Some modifications were made to bypass the tanks where methane release had been detected and quantified. An estimated amount of 120 t of methane emissions (3,000 t CO_2e) was prevented.
- At OMV Petrom, several initiatives to reduce methane emissions, routine venting, and flaring were undertaken and finalized in 2022, many of which focused on upgrading the compressor stations. Within OMV Petrom E&P, modernizing, replacing, and/or optimizing gas processing and transportation infrastructure contributed to the reduction of flaring, venting, and fugitive methane emissions. For example, in late 2022, a new gas treatment station for low-temperature separation (LTS) at the Icoana compressor station (E&P Valahia asset) was brought on stream. As a

result, gas that would normally be flared is captured and made available for sale. Consequently, GHG emissions will be reduced by an estimated 24,000 t CO_2e from 2023 onward due to the elimination of routine flaring. Additional operational measures for optimizing flows and processes in OMV Petrom E&P operations, e.g., rerouting gas flows and optimizing turnarounds, also contributed to the significant reduction of venting and flaring volumes.

Leak Detection and Repair

In 2022, we continued to implement leak detection and repair (LDAR) programs to reduce our fugitive emissions. Important steps have been taken to prevent and mitigate fugitive emissions, such as the pipeline integrity program in E&P and the LDAR program in both E&P and R&M. An LDAR program includes two fundamental steps: first, the identification of the leaking components and second, the repair of these leaks to minimize losses. This program serves as the basis for developing reduction projects in accordance with best practices in the industry and using the best available technologies.

In late 2021, the non-profit Clean Air Task Force (CATF) measured methane leaks at OMV sites, fifty of which were at OMV Petrom sites, using a specialized optical gas imaging infrared camera (e.g., FLIR GF320). Following their report, OMV Petrom launched an investigation and immediate action was taken to stop the leaks during 2022. Over the past ten years, OMV Petrom has invested more than EUR 1 bn in modernizing the upstream production infrastructure, including measures to reduce methane emissions. In addition, LDAR programs are routinely run in both upstream and downstream to detect, prevent, and eliminate fugitive emissions.

Overall methane emissions at OMV Petrom were reduced by 69% in 2022 vs. 2019. We will continue to allocate substantial funds to focusing on the upgrade of our facilities to closed production systems. As a prerequisite for our methane reduction measures, we prioritize monitoring and measuring emissions. In 2022, OMV Petrom E&P continued the relevant actions within the Measuring, Reporting, and Verification (MRV) program.

Methane Reporting

The upcoming EU methane legislation will introduce stringent requirements for methane leak detection and repair programs. In E&P, OMV has already started taking important steps toward compliance with the EU methane reporting requirements. The Ops CH4llenge Program is an internal program within E&P operations at OMV Petrom that was set up in 2022 with the purpose of preparing the operations' organization for the upcoming EU Regulation on methane. Specific products and work packages that address the main requirements of the proposed Regulation have been defined and are being developed. Among them, a pilot project for the detection and quantification of methane emissions in selected clusters of facilities and wells from three assets in Romania was kicked off in 2022 and will be completed in early 2023. The detection and quantification services were performed by third-party specialized contractors. This enabled us to achieve the following reporting levels:

- Source-level methane emissions for operated assets by direct measurements and sampling to establish the specific emission factors
- Source-level methane emissions for operated assets complemented by measurements of site-level methane emissions, thereby allowing assessment and verification of the source-level estimates aggregated by site

Outlook

In 2023, OMV will continue to pursue projects to further phase out routine flaring and venting, reduce Scope 1 emissions, and expand and intensify our LDAR campaigns. For example, in Tunisia, an LDAR campaign has been planned. At the Auersthal Gas Compressor Station in Austria, two gas turbines (i.e., in the baseload and booster compressors) will be replaced with e-motors/electric drives to reduce fuel gas consumption. As a result, approx. 35,000 t CO_2e will be saved annually. Through power centralization, field electrification, and installation of two trunklines that will connect the Early Production Facility (EPF) to the Central Processing Facility (CPF), a reduction in flaring of approx. 6% has been calculated, which will result in savings of 13,500 t CO_2e annually.

In general, 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, as well as establishing standard methane reporting with the required granularity (e.g., source level, site level).

Target 2025	▸ Achieve an E&P methane intensity[8] of 0.2% or lower
Targets 2030	▸ Achieve an E&P methane intensity of 0.1% or lower ▸ Zero routine flaring and venting of associated gas as soon as possible, but no later than 2030
Status 2022	▸ 0.4% E&P methane intensity ▸ Volume of gas routinely flared and vented decreased from 430 mn m^3 in 2021 to 240 mn m^3 in 2022
Most relevant SDG	

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

Energy Efficiency and Sourcing Renewable Energy

As an integrated oil, gas, and chemicals company, the OMV Group 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 owing to our energy efficiency measures, prevents non-compliance with regulatory requirements on energy use, and reduces GHG emissions.

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

- Government authorities: compliance with the EU Emissions Trading System (EU ETS) regulations relating to the submission of emission allowances within the EU ETS, compliance with the national transposition of the EU Energy Efficiency Directive, which requires greater energy efficiency in all stages of the energy value chain, and performing obligatory energy efficiency audits every four years
- Shareholders and other stakeholders with a direct financial interest in the OMV Group: 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

62% of sites are ISO 50001 certified

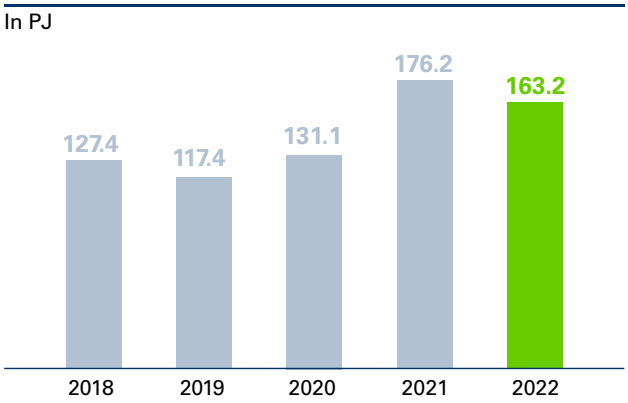
The OMV Group's Environmental Management Standard requires that all OMV businesses and activities use energy responsibly, conserve primary energy resources, and implement energy management plans in accordance with ISO 50001.

Identification 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 the refineries to reach certain energy intensity index ratings through annual monitoring campaigns. Based on their energy intensity, we identify and assess areas for improvement in terms of energy efficiency. Subsequently, we decide which measures to implement to reduce energy consumption as part of our environmental governance process.

[8] Methane intensity refers to the volume of methane emissions from OMV's E&P-operated oil and gas assets as a percentage of the volume of the total gas that goes to market from those operations. This is calculated as methane intensity [%] = methane emissions [Sm] / marketed gas (sales) [Sm^3].

Energy Consumption



Borealis is responsible for 36% of the energy consumption of the OMV Group and has set a target for 2030 to improve energy efficiency measures equal to 20% of the absolute primary energy consumption from a 2015 baseline. As OMV and Borealis operate joint facilities in Schwechat and Burghausen, an initiative to identify and increase joint synergies across both sites was established. Projects identified in 2022 are under evaluation, with the potential for implementation from 2024. For instance, the Schwechat refinery currently supplies boiler feed water to the Borealis facility. By adapting the supply lines, this boiler feed water can be replaced with cheaper, colder, and fully desalinated water, resulting in energy and CO_2 savings.

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 reduce costs and CO_2 emissions are also a priority at our refineries. In 2022, for example, at the Schwechat refinery, this included the optimization of the blade rows in one of the steam turbines, which resulted in an increase in the efficiency of the high-pressure section of the turbine, and a subsequent increase in the electrical output equal to the steam rate. Implementation of planned energy efficiency measures were on track in 2022 but were interrupted by the unplanned shutdown of the RD4 crude oil distillation plant at the Schwechat refinery, resulting in severe delays in implementation.

Sourcing Renewable Energy for Operations

We are increasingly turning to renewable sources of electricity to power our operations. One way of doing this is by purchasing renewable energy, which subsequently reduces our Scope 2 emissions. For instance, in our refineries in Schwechat and Burghausen, electricity contracts stipulate that 50% of purchased electricity must be from renewable sources. As such, in 2022, 50% of the purchased electricity at the Schwechat refinery and the Adria Wien Pipeline (AWP), 50.8% at the Burghausen refinery, and 82.5% at our tank farms and pumping stations came from renewable sources. 100% of the electricity purchased by OMV's Austrian filling stations and the head office are obtained from renewable sources. For OMV's refineries and the AWP, the electricity contracts are generally spot-indexed and contracted on a one- to three-year basis. Commodity pricing risk is managed using financial risk instruments.

In C&M, to reduce its Scope 2 emissions, Borealis has set a goal to source 100% of the electricity it uses from renewable sources by 2030. As such, in 2022, Borealis continued to establish Power Purchase Agreements (PPAs) to source renewable electricity on a longer-term basis, and sourced the electricity and utilities needed for its production processes. This subsequently resulted in the reduction of Scope 2 emissions.

Another approach is to produce renewable energy and use it to power our operations, subsequently reducing our Scope 1 emissions. In Austria, OMV and VERBUND built a ground-mounted photovoltaic (PV) plant, which produced 12.9 GWh of renewable electricity in 2022. This electricity covered 11% of the electricity demand of E&P Austria. In addition, the commercial operation of OMV's PV installation in Lobau began in early 2022, where a PV tracker system with an output of 5.6 MWh was installed. In comparison to a fixed installation, the tracker system, which follows the path of the sun, enables an increase in the generation of green electricity of approx. 10%. Production efficiency was increased by a further 5% by installing solar panels with bifacial (double-sided) modules.

In Norway, our joint venture partner Equinor has almost completed the construction of the largest floating offshore wind farm called Hywind Tampen, which will supply power to the Gullfaks and Snorre assets, contributing to a reduction in their emissions of 200 kta. The Hywind Tampen wind farm, when in full operation, will consist of eleven floating wind turbines with a total capacity of 88 MW, offsetting 200 kt of CO_2 emissions and 1,000 t of NO_x emissions per year. By the fourth quarter of 2022, seven turbines had been installed and started supplying clean electricity to the Gullfaks A, B, and C platforms. The last four turbines will be installed in the spring of 2023 and will deliver power to the adjacent Snorre A and B platforms.

2022 Actions

Energy Efficiency

Energy efficiency measures implemented at our three refineries in 2022 have made it possible to achieve an annual reduction of more than 38.5 kt CO_2e and energy savings of 510 TJ. These include:

- Ultrasonic atomizer nozzles for power plant boilers were installed at the Schwechat refinery to promote the atomization of liquid fuel to improve the quality of combustion. This resulted in a reduction in exhaust gas losses, fuel demand, combustion air demand, and CO_2 emissions.
- At OMV Petrom, the Petrobrazi refinery implemented several operational measures. For instance, repairing the TG3 turbogenerator resulted in a 1 MW increase in electricity production, improving the overall efficiency of the cogenerator. The steam traps were also replaced, subsequently reducing steam consumption by 8.3 t per day. During the shutdown in April 2022, the three-way valve was repaired, which reduced fuel gas consumption and subsequently saved approx. 1.3 t per day.

In C&M, examples of energy efficiency measures taken in 2022 were as follows:

- Borealis optimized the benzene purification column at Porvoo, which is expected to result in primary energy savings of 17 GWh/year.
- The extruder at Burghausen was improved and is expected to result in primary energy savings of 8 GWh/year.
- Borealis reduced the natural gas consumption of the regenerative thermal oxidizers (RTOs) at Borealis Polyolefine GmbH in Linz, Austria. This is expected to result in primary energy savings of 4.3 GWh/year.

In E&P, the key energy efficiency projects included the following:

- In Tunisia, additional electricity and gas meters were installed at the ISO 50001-certified Waha Central Processing Facility and Camp to improve energy monitoring.
- At the Māui Production Station in New Zealand, one recompressor was replaced with an electric compressor rather than upgrading obsolete control systems. This new compressor provides both an energy efficiency improvement (correctly sized for production rates and high-efficiency drive) and CO_2 reductions (approx. 3,500 t CO_2e per year).
- In Malaysia, SapuraOMV diesel consumption of the chartered utility vessel that supports B15 platform operations was optimized, resulting in a reduction in fuel consumption of 15%.
- At OMV Petrom's Moldova asset, three engines from the Comănești combined heat and power plant were relocated to two new locations for better usage of the associated gas and to simultaneously obtain electricity and useful thermal energy. In parallel, in the Gas & Power division, the air conditioning systems in the T2 gas metering stations were changed to further reduce the electricity consumption of the new equipment.

Operational Renewable Energy Initiatives

Over the next few years, the OMV Group intends to continue scaling up the sourcing and use of renewable energy. In 2022, key actions included:

- In 2022, after the completion of Phase II, 12.9 GWh of renewable electricity was produced from the PV park at Schönkirchen. The generated electricity was used for ongoing operations in E&P Austria. It is estimated that if the PVs installed during both Phases I and II are simultaneously operational throughout the year, 15.84 GWh of renewable energy will be produced.
- Since the start-up of the PV plant at the Lobau tank farm in February 2022, approx. 7.2 GWh of renewable energy has been produced, covering approx. 45% of the annual electricity demand of the tank farm and resulting in savings of around 2,100 t CO_2 per year.
- OMV Petrom completed the installation of PVs at its first solar park in Icoana, Olt County. The park includes nearly 1,000 PV panels installed over an area of 5,500 m^2. The green energy produced (approx. 415 MWh/year) will be used to supply electricity for ongoing operations in the E&P segment. This will result in a reduction of more than 1,200 t CO_2 throughout the entire life cycle of the panels.
- In Tunisia, utility air compressors with photovoltaic panels were installed at the Waha wells, while the Nawara well sites and pipeline valve stations were also equipped with PV panels for autonomous electricity generation.
- By the end of the fourth quarter of 2022, PV panels were installed at 284 OMV and OMV Petrom branded filling stations. The electricity produced from these installations annually is estimated at 7,000 MWh.

Power Purchase Agreements

Several Power Purchase Agreements (PPAs) with renewable energy providers were signed by the OMV Group in 2022, including the following:

- In April 2022, a PPA was signed between OMV and WEB Windenergie AG. With an output of 5.6 MW and annual electricity production of 13.7 GWh, the anticipated clean wind energy supplied to the OMV Group will be used to generate green hydrogen using an electrolyzer at the Schwechat refinery in 2023.
- In February 2022, Borealis and Finnish energy company Fortum signed a long-term PPA to source renewable energy from two onshore wind parks. Starting mid-2024, 800 GWh of renewable power will be supplied to the Borealis production operations in Porvoo, Finland, over the course of eight years.
- In October 2022, Borealis and Axpo Nordic, a subsidiary of Switzerland's largest renewable energy provider, signed a wind PPA, which includes the annual supply of more than 130,000 MWh of wind power to the Borealis production location in Stenungsund, Sweden, over the next ten years. The electricity will be generated by a new onshore wind farm (Hultema) located in central Sweden, with delivery expected to start in January 2024.
- In Belgium, Borealis signed a PPA with Eneco, a Dutch energy supplier. The energy will be generated by an existing offshore wind park (Mermaid) located in the North Sea.
- Borealis also signed a co-investment agreement with VERBUND to build a PV plant (4.8 MWp) at its production location in Schwechat, Austria, and simultaneously entered a ten-year PPA to obtain renewable hydroelectricity from two existing hydro plants in Austria, which are part of VERBUND's portfolio. As a result, Borealis further increased its renewable electricity and is on track to reach its 2030 target.

Outlook

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

- Waste heat from refinery plants HDS3, PTU, and FP3 will be used to replace steam for preheating the feed water in power plant 2 at the Schwechat refinery. This steam will be used to heat the existing and new Vienna district heating networks for Wien Energie and Vienna International Airport.
- As OMV and Borealis operate joint facilities in Schwechat and Burghausen, we will continue to identify and increase joint synergies across both sites. For instance, from mid-2023, flared quantities will be reduced, as the discontinuous nitrogen-rich gases produced by OMV will be combusted in the Borealis regenerative thermal oxidation (RTO) plant, rather than being sent to the elevated flare. Further energy efficiency projects are in development for implementation in 2024.
- By 2025, OMV Petrom aims to install PVs at half of its network of OMV Petrom filling stations. PV panels at additional OMV filling stations in Austria, Hungary, Slovakia, and Slovenia are also scheduled to be installed in 2024.

We will continue to increase our sourcing of renewable energy to power our operations. In C&M, the segment purchasing the greatest amount of energy, our aim is to ensure that all energy purchased is renewable by 2030.

In the future, where local regulations permit, we also plan to produce renewable energy and feed it into the electricity grid for use by third parties. The potential for doing this in the countries where we have business operations is currently being evaluated.

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

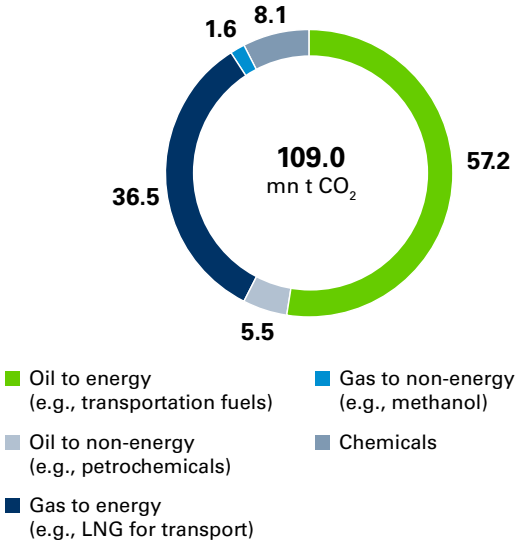
- Environmental concerns

Most relevant SDGs

As an oil, gas, and chemicals company, we are aware that a large percentage of our emissions come from the use of our products. At present, about 76% of the OMV Group's products are directly used for combustion, significantly contributing to global climate change. As such, we have a unique responsibility in this regard, and understand that a "business as usual" approach is no longer an option.

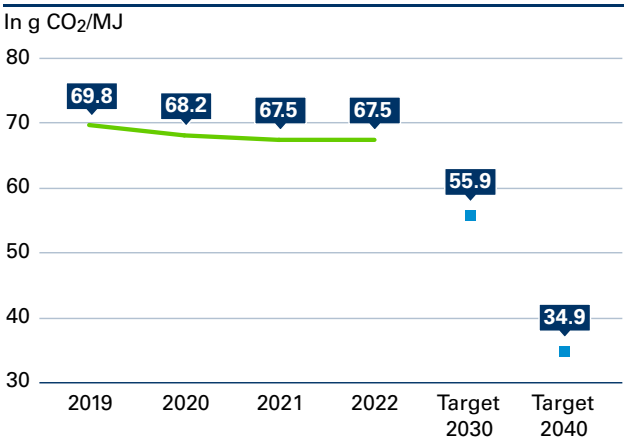
GHG Scope 3 Emissions from Products[9]

In mn t CO_2 equivalent



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 supporting and accelerating the energy transition, and becoming a net zero business by 2050 or sooner in alignment with the IEA's Net Zero Emissions (NZE) scenario, which foresees limiting the global temperature rise to 1.5°C. 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 our energy supply by at least 20% by 2030 and by at least 50% by 2040, both against the baseline year 2019. These intermediate targets on our pathway to net zero by 2050 are approximated to the IEA's Sustainable Development Scenario (SDS), which foresees limiting the global temperature rise to well below 2°C and is thus aligned with the goals of the Paris Agreement.

Carbon Intensity of Energy Supply[10]



Our absolute emissions targets cover all parts of the OMV Group, i.e., the upstream, downstream, and chemicals segments and their respective value chains. These divisions are expected to decarbonize at different rates, with a higher rate of decarbonization forecast in our energy segments (E&P and R&M). This is attributable to the immediate reductions that will be achieved by our plans to minimize fossil fuel production and sales: We aim to decrease oil and gas production levels to around 350 kboe/d and reduce crude distillation throughput by 2.6 mn t, both by 2030. Growth in these segments will instead come from zero-carbon products, such as geothermal energy, photovoltaic, wind, hydrogen, and sustainable fuels. In our E&P segment, we will build up around 10 TWh of renewable energy production (including geothermal, PV, and wind). In our R&M segment, we are primarily focusing on finding solutions for hard-to-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 kta of sustainable aviation fuels by 2030. This scale-up of zero-carbon energy product sales while decreasing fossil fuel sales is central to OMV's climate strategy.

Meanwhile, our chemicals segment is projected to grow by 35% in monomer production volumes and 30% in polyolefins production volumes by 2030. In this non-energy segment, we will also reduce our Scope 3 emissions by pursuing circular economy technologies, but not at the same rate as our energy segments.

In this material topic, we focus on reducing the carbon footprint of our energy supply, as encapsulated in the key metric "carbon intensity of energy supply," for which we have also set 2030 and 2040 targets. 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.

[9] Includes Scope 3, Category 10: Processing of sold products, and Scope 3, Category 11: Use of sold products

[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 CO_2) from the use of sold energy products, against the total energy value of all externally sold energy products (in MJ) (excluding purely traded volumes). GHG data that are part of OMV's 2030 and 2040 targets are subject to baseline recalculation; therefore, historical data has been recalculated. See Environmental Data for more details.

Target 2025	▸ Reduce carbon intensity of product portfolio (Scope 3) by >6% vs. 2010
Targets 2030	▸ Reduce absolute Scope 3 emissions[11] by ≥20% vs. 2019 ▸ Reduce carbon intensity of energy supply by ≥20% vs. 2019
Targets 2040	▸ Reduce absolute Scope 3 emissions by ≥50% vs. 2019 ▸ Reduce carbon intensity of energy supply by ≥50% vs. 2019
Status 2022	▸ Carbon intensity of product portfolio reduced by 3% vs. 2010 ▸ Absolute Scope 3 emissions reduced by 8% vs. 2019 ▸ Carbon intensity of energy supply reduced by 3.3% vs. 2019
Most 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

Governance

OMV's energy transition is the cornerstone of our Group's business strategy. Our sustainability framework and "net zero by 2050" target were the basis for developing the business strategy 2030 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 responsible for setting our climate targets and ensuring that our Group's business strategy is aligned with meeting these targets. Correspondingly, meeting our climate change targets is a part of executive remuneration, with GHG reduction targets included in the Long-Term Incentive Plan (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 established a new committee, the Sustainability and Transformation Committee. Their purpose 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 impact on 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.

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 team coordinates activities throughout the business, providing guidance to stakeholder groups such as subsidiaries, business units, and assets on GHG and energy-related topics. 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 Carbon, Energy & ESG Management department. To ensure consistency across the Group, there are also dedicated teams in OMV Petrom and Borealis.

[11] For our GHG targets 2030 and 2040 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 segment, and Category 12: End-of-Life of Sold Products for OMV's non-energy segment.

Also in 2022, the Carbon, Energy & ESG Management team developed a Group-wide GHG Management Framework. This new OMV Group regulation defines how to measure, report, and manage greenhouse gas emissions and contains the definitions, boundaries, and rules for the OMV Group's strategic GHG reduction targets and "net zero by 2050" ambition. It also defines the requirements for purchasing voluntary carbon offsets and their contribution to achieving the Group's GHG target.

In 2022, OMV updated its Capital Allocation Framework and developed a strategic scoring methodology for investment projects based on four pillars: business strategic targets, financial metrics, risk profile, and climate targets impact. This new methodology has been tested in a pilot phase. The scoring helps to objectively define and review OMV's most important strategic projects and allows for holistic portfolio optimization across the OMV Group to support our strategy delivery, including our GHG reduction path. Climate scoring is an integral part of this overall scoring and covers the investment's impact on the OMV Group's Scope 1, 2, and 3 climate targets for 2030, as well as EU taxonomy relevance.

As part of the updated Capital Allocation Framework, OMV also introduced a new definition for "sustainability CAPEX," which encompasses investments that meet one of two criteria: either they are aligned with the EU taxonomy or they are investments that support the implementation of OMV's 2030 Sustainability Framework. The goal of the new Capital Allocation Framework is to promote and facilitate investments in projects aligned with our climate targets, including our long-term net zero target, rather than traditional fossil fuel-related investments. For more information, see Sustainability Governance.

Zero-Carbon Products

The scale-up of zero-carbon and renewable energy product sales while reducing fossil fuel sales is central to reducing the carbon footprint of our energy supply. Zero-carbon and renewable energy products include biofuels, electricity, waste heat, and new energy products such as geothermal heat.

In our upstream division, the Low Carbon Business (LCB) team has been working on expanding our photovoltaic asset base, including exploring battery and storage options. Based on our subsurface knowledge, capabilities, and asset base, we have also been exploring carbon capture and storage solutions. We collaborate with industry and research partners on these activities in line with applicable regulatory and legal requirements. We are also investigating solutions for subsurface energy storage, e.g., with hydrogen or compressed air, and looking at options to explore and commercially develop geothermal energy potential in the countries where we operate. These projects are in the R&D or initial investment phase.

In R&M, we are contributing to the creation of a sustainable energy system by identifying and maturing solutions, with a strong focus on markets that are hard to electrify using batteries 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-friendly fuel with the lowest possible downtime. Our portfolio focuses on waste-based and 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 and roll-out of green technologies.

The successful implementation of all these projects will reduce our absolute emissions, create green, innovative products and services for society, and provide a key differentiator for OMV.

Management and Due Diligence Processes

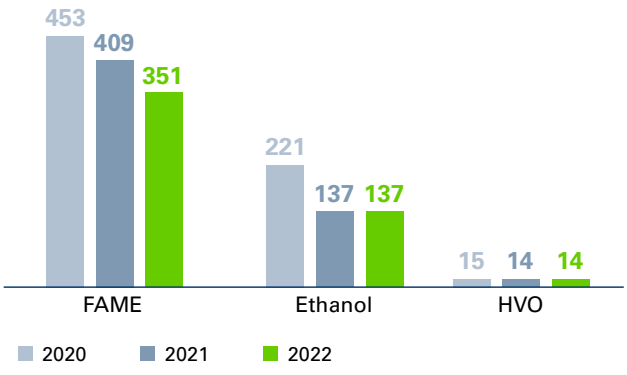
OMV has defined sustainability criteria that influence which projects and technologies are selected for investment. For all investments and M&A activities, it should be ensured that all climate-related risks are identified, assessed, and evaluated. This will include the assessment of the actual and forecast carbon footprint of the respective investment and M&A. Projects that contribute positively to the achievement of OMV's climate targets are preferred for investment (for more details, see Sustainability Governance). All project ideas selected for maturing need to demonstrate a feasible trajectory from pilot and demo stage to full industrial scale in the medium term.

Responsible Biofuels Sourcing

All biofuels purchased by OMV in 2022 and used for blending meet the requirements of the EU's Renewable Energy Directive (EU) 2018/2001. 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, OMV Germany, OMV Slovakia, and OMV Slovenia are also certified according to the ISCC EU standard.

Biofuel Volumes[12]

In megaliters



[12] 2021 figure restated and 2022 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.

OMV purchases biodiesel mainly from European producers that use very little palm oil. International Sustainability & Carbon Certification (ISCC) standards require that no deforestation took place from January 2008 onward for any feedstock that is used for biodiesel generation. Since July 2021, OMV has also complied with the Austrian legal requirement not to use palm-oil-based biofuels for target fulfillment. In 2022, of all biofuels placed on the market by OMV, only around 0.6% were based on palm oil. The main feedstocks used are rapeseed oil (31%), soybean oil (14%), used cooking oil (11%), corn (12%), wheat (9%), and triticale (5%).

OMV plans to use vegetable oils and used cooking oil as well as other potential waste and advanced feedstock to produce biofuels 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.

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 in 2023, the Company aims to start its 200 kta co-processing of sustainable feedstock in Schwechat. It is important to note that no palm oil will be 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 in future (2024–2025). In December 2020, OMV committed to investing EUR 200 mn in the construction of the Co-Processing unit at the Schwechat refinery. Utilizing this process will lead to an annual reduction of OMV's carbon footprint of up to 360 kt CO_2.

2022 Actions

The following key activities were carried out across the Group in 2022:

Geothermal Energy

In 2022, the LCB made headway in the development of two geothermal projects: one in Austria, the other in Germany. In Austria, OMV conducted a production and injection test to analyze the geothermal potential in the Vienna Basin. Regional and local geological studies have been progressing, and potential locations for geothermal power plants have also been selected. In Lower Saxony, Germany, OMV and partner ZeroGeo Energy GmbH have an equal interest of 50% each in a geothermal exploration project called Thermo. The initial project aim is to collect geological data, in particular gravity and magnetic measurements, over an area of approx. 5,000 km^2. The data collected will be used to assess the geothermal energy potential and will be part of a comprehensive evaluation of future geothermal activities in the area. Based on preliminary studies, subsurface experts indicate that the geothermal conditions in the Vienna Basin are suitable for use as a direct heat carrier. In northern Germany, the geothermal energy could be used to generate electricity.

Glycerin2Propanol

OMV made the final investment decision in 2021 to build a Glycerin2Propanol pilot plant at the Schwechat refinery. It will be based on its newly patented process technology, which will produce propanol from low-value material crude glycerin from 2023 onwards. The plant will use a catalyst, or reaction accelerator, developed in-house by OMV to transform the biogenic waste-based crude glycerin into a so-called advanced bioalcohol (propanol). In doing so, the plant will generate what are known as advanced biofuels, which are not in competition with foodstuffs and which, when added to gasoline, reduce its carbon footprint.

While glycerin is a waste/by-product of the production of biodiesel and the manufacture of detergents and soaps, 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 an advanced bioadditive for gasoline. It can also be used as a sustainable feedstock for the chemicals market to replace fossil-fuel-based propanol. OMV is set to invest around EUR 30 mn in the scale-up of this project, of which around EUR 8 mn will be funded through the Austrian Research Promotion Agency (Forschungsförderungsgesellschaft; FFG) and the COVID-19 premium. The capacity of the pilot plant will be 1.25 mn l of propanol per year. This will lead to a CO_2 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 to produce around 125 mn l of propanol per year and reduce CO_2 emissions by around 180 kt. The Glycerin2Propanol pilot plant will be located at the Schwechat refinery alongside the ReOil® plant so that both units can take advantage of a combined operator station, exploiting the synergy of a shared operator concept. In addition to 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.

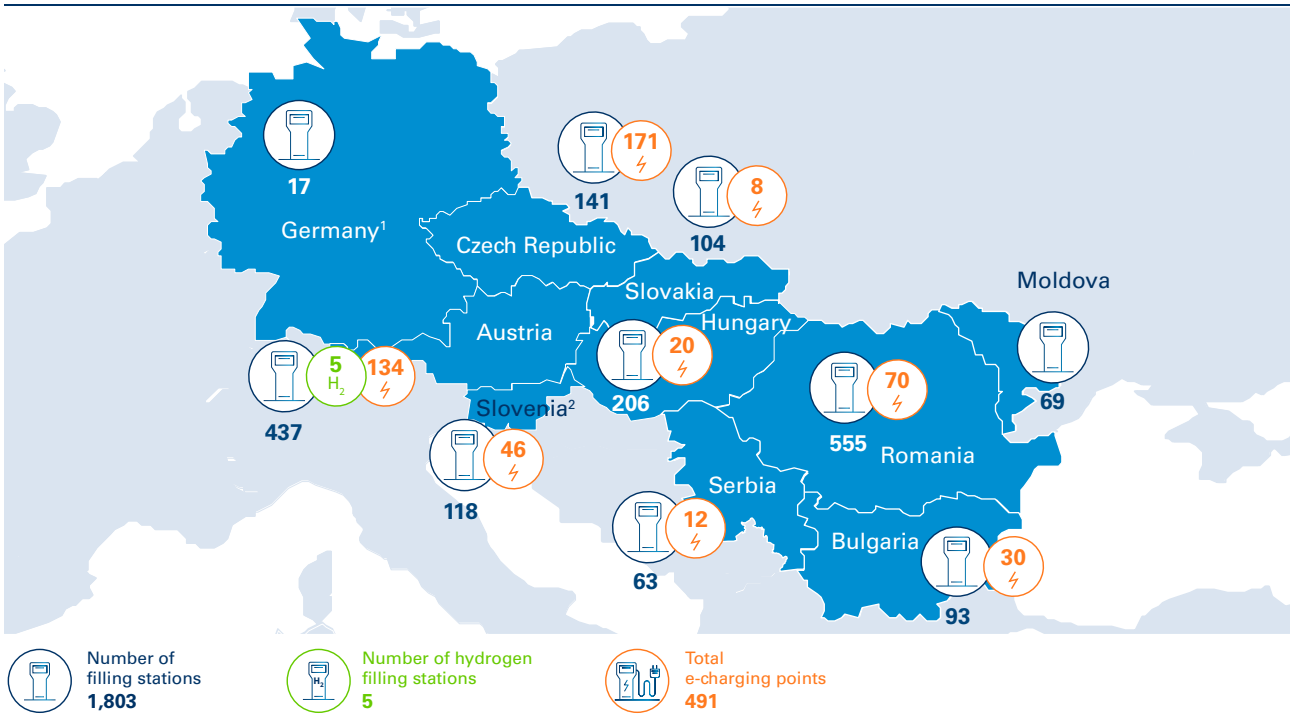
In 2022, the Glycerin2Propanol pilot plant was in the execute phase, from the end of detail engineering to construction. The project team and the contractor (Dutch pilot plant company Zeton) worked closely to successfully accomplish the preliminary assembly of the modular plant in the workshop at Zeton.

Hydrogen

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 gray hydrogen in the refinery. This would reduce OMV's carbon footprint by up to 15 kta of fossil CO_2. Furthermore, the extension of the value chain into the transport sector is being evaluated, e.g., for application in the hard-to-electrify segment (e.g., trucking).

To help create the conditions for the mass-market roll-out of hydrogen trucks in Europe, the H_2Accelerate 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 in Phase II (2025+) 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 hydrogen-fueled 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 high-capacity European corridors with good refueling station coverage. During the next decade, these clusters can then be interconnected to build a truly pan-European network.

Retail 2022



[1] On May 1, 2022, OMV closed the transaction to sell its filling station business (285 filling stations) in Germany to EG Group. Furthermore, a divestment agreement was signed for Avanti Germany comprising the sale of 17 unmanned filling stations to PKN Orlen in December 2022.
[2] OMV has agreed to sell its business in Slovenia to MOL Group. The closing of this transaction is expected in 2023.

Sustainable Aviation Fuels

Another focus topic is the hard to electrify area of e-fuels, the core building block of OMV's Sustainable Aviation Fuel (SAF) portfolio, which shows great potential for enabling climate-friendly air travel. While in theory the concept is simple, i.e., 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 is leading a project consortium together with industrial partners like BASF and thyssenkrupp Uhde, and academia (e.g., the German Aerospace Centre DLR and ASG Analytik-Service Gesellschaft) to develop a process to produce SAF based on methanol (M2SAF project). In addition to catalyst development, process development, plant integration, and the design of a demo plant, the project also includes techno-economic and -ecological analysis, as well as accompanying support for the certification and analysis of the new aviation fuels. The project is also targeting the production of a 100% drop-in capable SAF and enabling a process route with high selectivity and minimal additional CO_2 emissions, and with a high degree of integrability into existing brownfield or greenfield installations. The starting point of the process is sustainably produced methanol, either from CO_2 and hydrogen or from biogenic feedstock. The development project started in August 2022 for an initial period of 2.5 years and is being funded by the German Federal Ministry for Digital and Transport (BMDV).

OMV is already delivering SAFs to Austrian Airlines at Vienna airport. In 2022, Memorandums of Understanding (MoUs) for the intended offtake of SAFs were signed with the Lufthansa Group, Wizz Air, and Ryanair. The total amount of intended SAF offtake between 2023 and 2030 is up to 160,000 t for Ryanair, up to 185,000 t for Wizz Air, and more than 800,000 t for the Lufthansa Group. The OMV Group aims to increase the production and marketing of SAFs from <2 kt in 2022 up to 700 kta in 2030.

Outlook

- In the coming years, we will focus on implementing the investment projects mentioned (e.g., 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 kta of sustainable aviation fuels. OMV will also expand its capabilities to take advantage of the growth in electric vehicle charging. By investing more than EUR 400 mn by 2030, OMV will offer more than 2,000 electric charging points at highway and transit route filling stations, plus around 17,000 office wall-box charging points. In addition, following the MoU signed by the OMV Group and Austrian Post in 2021 for the use of green hydrogen in heavy goods vehicles (HGVs), the first use of green hydrogen is expected in 2023 at the latest. By 2030, 2,000 HGVs will be powered by green hydrogen fuel cells.
- For the Glycerin2Propanol project, the factory acceptance test will be conducted in the first quarter of 2023 and the arrival of the first modules in Schwechat is planned for the second quarter of 2023. In parallel, the propanol from OMV's biobased process has been registered at the European Chemicals Agency (ECHA) as the first form of renewable propanol, a precondition for the bulk chemical market. Looking to the future, collaborative R&D efforts have begun to transform the propanol into sustainable aviation fuel.
- Investments of approx. EUR 5 bn have been planned until 2030 to build the Low Carbon Business (LCB). In our Energy division, the LCB team has been working on expanding our renewables asset base with a focus on captive use within the OMV Group. Furthermore, we are looking at opportunities to explore and commercially develop the geothermal energy potential. Based on our subsurface knowledge, capabilities, and asset base, we have also been exploring carbon capture and storage solutions. We collaborate on these activities in line with applicable regulatory and legal requirements in conjunction with industry and research partners. Additionally, we are also investigating solutions for subsurface energy storage, e.g., with hydrogen or compressed air. These projects are in the R&D or initial investment phase.
- In Romania, 2022 saw OMV Petrom and Complexul Energetic Oltenia deciding to invest more than EUR 400 mn over the coming years in building four PV parks in Ișalnița, Tismana, Roșia, and Rovinari, on the sites of the former mining operations run by Complexul Energetic Oltenia. The PV parks will produce a total of 450 MW, and from 2024, we anticipate that the renewable energy produced will be supplied to the national energy system.

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 zero-carbon product sales, we also recognize that neutralization measures will be necessary. Neutralization measures include, but are not limited to, Carbon Capture and Storage (CCS), Carbon Capture and Utilization (CCU), Bioenergy with Carbon Capture and Storage (BECCS), as well as, to a very limited extent, voluntary offsetting (technological and nature-based solutions). 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

As a general rule, the OMV Group uses voluntary carbon offset credits only in addition to its efforts to reduce its own GHG emissions. The maximum acceptable GHG emission reduction contribution from carbon offsets to achieve our absolute 2030 and 2040 GHG targets is 5% of the total absolute required emission reduction. To achieve net zero status by 2050, which requires the maximum possible reduction of our own direct and indirect GHG emissions, carbon offsets can only be used to neutralize the remaining gross emissions that cannot be eliminated in any other way. As such, only limited options are acceptable as counting toward our GHG target achievement. These include high-integrity carbon offset credits from programs that ensure robust carbon offset project design and implementation in line with the UN SDG 12 (sustainable consumption and production) and one additional environmental/social SDG, as well as those that comply with the minimum social safeguards. The detailed criteria are defined in OMV's GHG Management Framework.

OMV offers carbon offsetting to customers and 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. In 2022, the biggest contributors in terms of CO_2 offsets in our portfolio were wind and solar energy projects in India and China, and forest protection projects in Brazil. Since 2019, the OMV Group also purchased CO_2 offsets in various hydropower (5%), solar (28%), and wind (44%) energy projects in India, China, Bulgaria, and Turkey, various afforestation projects (22%) in Romania, Uganda, and Brazil, as well as a gas recovery and biogas project (2%) in Turkey. Climate protection projects are offered by ClimatePartner and are verified according to one or more of the following internationally recognized standards: Gold Standard (GS), Verified Carbon Standard (VCS), Certified Emission Reductions (CER), and Climate, Community & Biodiversity Standard (CCBS). None of these offsets have currently been accounted to contribute towards OMV's GHG reduction target achievement.

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

OMV aims to capture CO_2 and ideally use it as a resource. Carbon capture and utilization technologies, such as capturing CO_2 emissions from our refineries, hydrating the CO_2, 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.

Lafarge, OMV, VERBUND, and Borealis are collaborating on developing the C2PAT initiative, which will make a significant contribution to decarbonization. The goal of C2PAT is to capture the CO_2 emitted at Lafarge's cement plant in Mannersdorf, Austria, and, together with hydrogen from renewable sources, transform it into feedstock for sustainable chemical products. The partners intend to turn the initiative into an industrial-scale project, which should serve as a blueprint for other industries in the future, especially for the "hard to abate" sectors. For example, C2PAT aims to demonstrate a novel cross-sectoral carbon value chain on an industrial scale. Industrial CO_2 released during cement production should be captured and transformed using green hydrogen into feedstock for a variety of renewable-based chemicals and value-added plastic products. It 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.

2022 Actions

340 kt CO_2e verified emissions offset by customers

- Currently, OMV's customers can voluntarily offset the carbon footprint resulting from using all products they purchase from us, such as diesel, gasoline, bitumen, heating oil, and natural gas. OMV GAS offers this service in all markets. We recognize the 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 the jö Bonus Club card in Austria, while since early October 2022, 20% of the carbon footprint of Romanian customers that purchase MaxxMotion fuels has been offset without surcharge. 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's MaxxMotion CO_2 reduction campaign in Romania supports local and international carbon offsetting projects aimed at forest protection, e.g., in Romania and Brazil. Every time a customer fuels up with OMV MaxxMotion Performance Fuels, 20% of the carbon emissions are offset through this program. In addition, when a customer chooses to donate 300 points to a charity of their choice from the OMV MyStation application, OMV automatically matches it with another 300 points, which subsequently adds up to the amount needed to plant one tree.
- In 2022, the OMV Group worked on innovative solutions to utilize captured CO_2 as an alternative feedstock. For instance, Swiss sports brand On partnered with Borealis and LanzaTech in 2021 to create Clean-Cloud™, 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 the sole of a shoe, 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. In 2022, On presented the first ever shoe made from carbon emissions. Read more in the Borealis Report.

Outlook

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