We inspire
with energy.

Annual Report 2022

Our future:
#climatepositive

MVV in Figures

	FY 2022	FY 2021	% change
Financial key figures			
Sales and earnings			
Adjusted sales excluding energy taxes (Euro million)	4,199	4,131	+ 2
Adjusted EBITDA [1] (Euro million)	564	482	+ 17
Adjusted EBITDA excluding disposal gains	509	479	+ 6
Adjusted EBIT [1] (Euro million)	353	278	+ 27
Adjusted EBIT excluding disposal gains	298	275	+ 8
Adjusted annual net income [1] (Euro million)	249	177	+ 41
Adjusted annual net income after minority interests [1] (Euro million)	176	150	+ 17
Capital structure			
Adjusted total assets at 30 September [2] (Euro million)	6,888	5,815	+ 18
Adjusted total assets excluding margins at 30 September [2, 3] (Euro million)	5,434	4,994	+ 9
Adjusted equity at 30 September [2] (Euro million)	1,863	1,662	+ 12
Adjusted equity ratio at 30 September [2] (%)	27.1	28.6	– 5
Adjusted equity ratio excluding margins at 30 September [2, 3] (%)	34.3	33.3	+ 3
Net financial debt at 30 September (Euro million)	32	628	– 95
Net financial debt excluding margins at 30 September [3] (Euro million)	1,449	1,450	0
Cash flow and investments			
Cash flow from operating activities (Euro million)	952	1,203	– 21
Cash flow from operating activities excluding margins [3] (Euro million)	357	360	– 1
Investments (Euro million)	335	306	+ 9
Value performance			
ROCE (%)	16.2	10.2	+ 59
ROCE excluding disposal gains (%)	13.7	10.1	+ 36
ROCE excluding margins [3] (%)	10.7	8.9	+ 20
ROCE excluding disposal gains and excluding margins (%)	9.0	8.8	+ 2
WACC (%)	6.6	5.9	+ 12
Value spread (%)	9.6	4.3	>+ 100
Value spread excluding disposal gains (%)	7.1	4.2	+ 69
Value spread excluding margins [3] (%)	4.1	3.0	+ 37
Value spread excluding disposal gains and excluding margins (%)	2.4	2.9	– 17
Capital employed (Euro million)	2,178	2,715	– 20
Capital employed excluding margins [3] (Euro million)	3,298	3,115	+ 6
Share			
Dividend per share [4] (Euro)	1.05	1.05	0
Adjusted earnings per share [1] (Euro)	2.67	2.28	+ 17

1 Excluding non-operating measurement items for financial derivatives, excluding structural adjustment for part-time early retirement and including interest income from finance leases

2 Excluding non-operating measurement items for financial derivatives

3 Excluding collateral deposited at MVV for counterparty default risks (margins)

4 Subject to approval by Annual General Meeting on 10 March 2023

Non-financial key figures	FY 2022	FY 2021	% change
Direct CO_2 emissions (Scope 1) [1, 2] (tonnes 000s)	3,647	3,510	+ 4
Indirect CO_2 emissions (Scope 2) [1, 2] (tonnes 000s)	147	115	+ 28
Indirect CO_2 emissions (Scope 3) [1, 2] (tonnes 000s)	5,072	5,310	– 4
Electricity generation capacity from renewable energies [1, 3] (MW_e)	614	564	+ 9
Renewable energies as share of proprietary electricity generation [1] (%)	32	32	0
Electricity generation volumes from renewable energies [1, 4] (kWh million)	1,295	1,217	+ 6
Green heat generation capacity [1] (MW_t)	861	793	+ 9
Green heat as share of proprietary heat generation [1, 5] (%)	39	36	+ 8
Green heat generation volumes [1, 2, 5] (kWh million)	2,662	2,561	+ 4
Completed development of new renewable energies plants (MW_e)	476	610	– 22
Operations management for renewable energies plants (MW_e)	3,779	3,811	– 1
Number of employees at 30 September (headcount)	6,556	6,470	+ 1
of which women	1,864	1,825	+ 2
of which men	4,692	4,645	+ 1
of which full-time employees	5,529	5,513	–
of which part-time employees	1,027	957	+ 7
Number of trainees at 30 September (headcount)	335	340	– 1
Share of female managers at 30 September (%)	16	14	+ 14
Accident frequency rate (LTIF) [6] (number of accidents per 1,000,000 hours of work)	3.7	4.1	– 10

1 Fully consolidated and at-equity companies

2 Previous year's figure adjusted

3 Including electricity generation capacity from wind turbines for repowering at 30 September 2022 (30 MW)/30 September 2021 (20 MW)

4 Including electricity generation volumes from wind turbines for repowering at 30 September 2022 (21 million kWh)/ 30 September 2021 (14 million kWh)

5 Heat from biomass, biogas and energy from waste plants, including RDF plants

6 Figures for 2021 and 2020 calendar years

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To Our Shareholders

Letter from the CEO

Dr. Georg Müller
CEO of
MVV Energie AG

DEAR LADIES AND GENTLEMEN,

When the new Federal Government took up office about a year ago, the energy policy agenda was clear: Inject fresh momentum into the energy transition, speed up the expansion of renewable energies, bring green heat out of the shadows, step up efforts to reduce CO_2. All measures were to be aligned to the 1.5-degree trajectory formulated in international climate agreements. The first projects were soon initiated and so-called "Easter" and "Summer" packages were prepared.

Have any of these aspects become any less important due to Russia's attack on Ukraine, the geopolitical consequences thereby triggered and the upheaval seen on energy markets? Certainly not! They still show the way ahead for wise energy policy, now maybe more than ever. But it is also right that these targets should be joined by the need to uphold supply reliability, (re-)stabilise markets and reduce the burden on consumers and industry.

We have to make a distinction between measures that still make sense in the long term and those that are additionally required in the short term. These two aspects have often been confused in the debates and variety of opinions expressed in recent months. This created the impression that Germany had moved away from its path towards a modern, forward-looking energy supply and was incapable of reacting appropriately to the disruptions seen in recent months. Both conclusions are wrong. In view of our international obligations, the basic direction of German energy strategy cannot be up for debate. The immediate measures taken by the Federal Government to secure commodity imports and gas procurement interdependencies on the one hand and support various customer groups in coping with price rises on the other may justify questions in individual cases. Given the available timescale and resources, however, this approach has the right focuses.

Equally valid is the question as to what the experience gained in recent months can teach us when it comes to achieving our long-term objectives. We have to do more to avoid unilateral dependencies, even if these always have been viewed critically. The importance of energy efficiency has been stressed repeatedly for years now, but still harbours substantial potential in terms of its practical implementation. Here, the primary goal is not to do without energy but rather to deploy smart technology and smart control to achieve greater output with less input. We cannot afford to damage our industrial base and SME networks, as this would weaken Germany as a place to do business. And the economy is the only guarantee we have for jobs with good perspectives and thus high levels of employment in future as well. We also have to address topics which at first glance may not seem directly related to energy procurement but which, due to domino effects, may lead to restrictions, particularly in the energy supply.

Heading for the future on a consistent #climatepositive course

With our course towards #climatepositive and our Mannheim Model with its three components of electricity transition, heat transition and green customer solutions, we acted well before the war in Ukraine to set out our key strategic principles. The events of recent months have shown that this approach is even more valid and important than ever. This way, we are not only contributing towards achievement of the 1.5-degree target in the Paris Climate Agreement. We are the first German energy company, and only the third worldwide, to be net zero compatible, i.e. we can actually reduce our CO_2 emissions to net zero. This was certified for us by the renowned Science Based Targets initiative (SBTi) in autumn 2022. This involves the strictest level of science-based corporate climate protection in Germany and internationally.

As Germany's second-largest supplier of district heat, if industrial steam is included, we are working at pace to implement the heat transition. By 2040, we will offer a climate-compatible heat supply to all customers at our locations. For Mannheim and the region, we will convert district heat to 100 percent green energy sources by 2030 at the latest. To achieve this, we will rely among other solutions on MVV's first river heat pump, connect our biomass CHP plant to the district heat grid, use additional waste heat from the waste incineration process and heat from deep geothermal energy. Not only that: We will build an initial pilot CO_2 capture facility in Mannheim in 2023. Scenarios adapted to local circumstances are being reviewed for our major locations in Kiel and Offenbach, such as the production of heat from water in Kiel Fjord.

To advance the electricity transition, we are consistently pressing ahead with expanding renewable energies. Since the start of the 2017 financial year, we have connected wind turbines and photovoltaic systems with capacities of more than 3,200 megawatts to the grid with our project development business. In the past financial year, we merged our subsidiaries Windwärts and Juwi and thus created an even more effective unit for expanding renewable energies under the auspices of MVV. Furthermore, we took over Avantag and thus strengthened our photovoltaics project development business in the B2B segment. We also made progress in expanding our own renewables portfolio and added several solar power plants and one windfarm to this. At the end of the 2022 financial year, our electricity generation capacity from renewable energies stood at 614 megawatts, corresponding to an increase of 50 MW compared with the previous year.

Robust financial and non-financial key figures

This consistent strategic alignment is also reflected in the breadth of our business portfolio. Together, these two factors provide us with the stability that is also reflected in our financial and non-financial key figures for the 2022 financial year. We present these to you in detail in this Annual Report. Our operating adjusted EBIT amounted to Euro 298 million in the 2022 financial year and was thus consistent with our forecast. To avoid any distortion in comparisons with previous years, we completely exclude one-off items, such as the significant disposal gains generated in the past financial year, from this key figure. I would also particularly refer to the significant growth in our balance sheet due to the hedge transactions requiring recognition pursuant to IFRS 9. This is solely due to their fair values as of the balance sheet date and does not allow any conclusions to be drawn as to our operating business. With the reduction in prices now already apparent, these items will decrease again, also without any impact on our earnings.

Despite all challenges, MVV can therefore report higher operating earnings, as expected at the beginning of the 2022 financial year. We owe this development above all to the commitment shown by our employees, now numbering more than 6,500, at all our locations. Each and every day, they renew their efforts to build our #climatepositive future. I would like to thank them all on behalf of the whole Executive Board.

Over the past years, we have based our dividend policy on continuity and the development in our operating earnings. We intend to maintain this approach in future as well. We will therefore again be proposing a dividend of Euro 1.05 per share for approval by the Annual General Meeting in March 2023. MVV's share will then reach a dividend yield of 3.6 percent.

Stability despite great uncertainty in overall economy and energy industry

Increased volatilities on the energy and procurement markets, energy and climate policy measures and regulatory requirements – all these factors will remain with us in the 2023 financial year as well. In terms of our strategic alignment, however, we feel strongly encouraged and supported by national and international climate protection efforts and legislative proposals. We will therefore continue to pursue initiatives derived from our Mannheim Model and maintain our level of investment, provided that developments in the overall economy and energy industry do not prevent us from doing so. We are taking a cautious approach to our forecast for 2023, as market conditions, macroeconomic developments and the impact on supply chains may have significant implications. Overall, we are nevertheless confident that we will be able to maintain our operating earnings, i.e. excluding one-off disposal gains, at least at the same level as in the past financial year.

Community and solidarity in difficult times

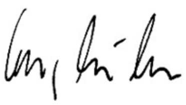
Given the war in Ukraine and its grave consequences, the months ahead will remain challenging. Our priority has to be to safeguard the energy supply while not losing sight of climate protection and affordability. This challenge confronts the whole of society and can only be solved together. Community and solidarity are therefore more important than ever in times like these. We can all play our part by using the valuable resource of energy more efficiently.

For many people, the current development in prices represents an enormous burden. The government will have to take appropriate account of this by easing the strain on people and companies. We at MVV also aim to make our contribution. With our Emergency Fund, we support retail customers who find themselves in financial difficulties through no fault of their own. To this end, we are regularly in contact with the City of Mannheim and welfare organisations. Furthermore, we are also helping people to save energy with our #MonnemSpartEnergie (Mannheim saves energy) campaign. In this, we are cooperating with bodies such as the Mannheim Climate Protection Agency. We were one of the first energy companies to launch a bonus campaign for successful gas saving. To participate, people living in our grid region can register and thus draw on the possibility of being additionally rewarded for successful saving measures.

MVV will continue to work consistently towards its goal of #climatepositive, not for ideological reasons but because this course leads to a sustainable energy system. This way, we intend not only to retain our resilience. We rather aim to make MVV even stronger as a company. That will enable us to make our contribution – with our own resources and at full steam in future as well – towards making a reality of the energy transition.

We would be delighted if you, our shareholders, would continue to accompany us on this course. On behalf of the whole Executive Board and all our employees, I would like to thank you for the trust you have placed in MVV.

Yours faithfully,



Dr. Georg Müller
CEO

Executive Board

Dr. Georg Müller

Dr. Georg Müller was born in Höxter in 1963. He gained a doctorate in law and followed this up with a master's degree from the University of Cambridge. Having worked as a lawyer, he came to the energy industry in 1995. His career took him from RWE AG, where he ultimately headed the Legal and Board Affairs department, via a position on the Executive Board at VSE AG (Technology and Sales Director) to RWE Rhein-Ruhr AG, where he was CEO. He has been CEO of MVV Energie AG since 1 January 2009 and is responsible for Commercial Affairs.

Verena Amann

Verena Amann was born in Ravensburg in 1981. She obtained her degree in business administration, majoring in marketing. From 2007 onwards, she held various responsible positions in the HR department at United Internet Group and its subsidiaries. In 2015, she took over the management of the Group HR Department at United Internet Group and also become Managing Director of the service company United Internet Corporate Services GmbH. She joined the Executive Board of MVV Energie AG on 1 August 2019, where she is responsible for Personnel and is Labour Director.

Ralf Klöpfer

Ralf Klöpfer was born in Backnang in 1966. He studied electrical technology, majoring in the energy industry, and thus laid a foundation for his subsequent career. This took him from Badenwerk AG to EnBW AG, where he built up EnBW Gesellschaft für Stromhandel mbH and the Energy Industry/Optimisation department at EnBW AG. He later worked as Director of Risk Management at EnBW Trading GmbH and as Spokesman of the Management at EnBW Vertriebs GmbH. After a stint as Managing Partner at enevio GmbH, he was appointed on 1 October 2013 to the Executive Board of MVV Energie AG, where he is responsible for Sales.

Dr. Hansjörg Roll

Dr. Hansjörg Roll was born in Offenburg in 1965. A graduate in chemical engineering, he went on to obtain a doctorate in engineering. After this, he worked at Badenwerk AG and EnBW Ingenieure GmbH as a project engineer and project director for power plant planning. In 2003, he came to MVV and took over the management of the industrial power plants at Gengenbach and Ludwigshafen. He subsequently held further management responsibilities at what is now MVV Enamic GmbH. He then worked as Managing Director at MVV Umwelt GmbH before being appointed on 1 January 2015 to the Executive Board of MVV Energie AG, where he has since been responsible for Technology.

Supervisory Board Report

Dr. Peter Kurz
Supervisory Board Chairman
of MVV Energie AG

DEAR LADIES AND GENTLEMEN,

The 2022 financial year was in many respects a challenging year.

It was a period in which the Supervisory Board was called on to accompany developments very closely. Alongside the coronavirus pandemic, whose effects remained virulent both in terms of protecting the health of our employees and with regard to global supply chain problems, these also included the war in Ukraine and the associated impact on available energy volumes and prices, as well as rising inflation and its implications for our company and its daily business operations.

The fact that the company was able to move successfully forward against this backdrop is a reflection of its strong strategic and economic foundations and of the superb work performed by the Group's total of more than 6,500 employees in the past financial year.

Despite all geopolitical, energy industry and economic uncertainties, MVV seized the opportunities resulting from the accelerated transformation in the energy market towards decarbonisation, decentralisation of the energy supply and sustainability and pressed ahead with its targeted further development.

The company's farsighted and well-considered procurement strategy, its broad-based portfolio of products and services and its solid balance sheet structure – these factors enabled it to perform well on an operating level in the 2022 financial year.

We presented our "Mannheim Model" at the UN Climate Conference in Glasgow in November 2021. As time has passed and given geopolitical developments, this model, in which we are pursuing the goal of becoming climate neutral by 2040 and even climate positive from then onwards, has proved more important than ever. The decision to forego additional use of natural gas and to head directly towards climate neutrality and even climate positivity was both logical and consistent. On this ambitious course, the company has the unrestricted support of the Supervisory Board.

The current winter will still be challenging. The topics of energy shortages and the associated developments in market prices will remain with us for some time. Avoiding gas shortages will require efforts on all levels. The Supervisory Board explicitly supports the energy-saving campaign initiated by MVV Energie and the gas bonus offered as a reward.

Summary of key focuses of Supervisory Board activities

In the year under report, the Supervisory Board fulfilled all aspects of the duties incumbent on it by law, the company's Articles of Incorporation and its own Rules of Procedure. The Executive Board was monitored and accompanied on an advisory basis in its management of the company. We based our activities in this respect on the extensive written and oral reports we received from the Executive Board. Moreover, the Supervisory Board Chairman was regularly in close contact with the Chief Executive Officer and, during the latter's period of absence due to illness, with the other members of the Executive Board. The Supervisory Board was therefore at all times informed about the company's strategic decisions, its ongoing business performance, as well as about the latest developments on the markets and in the company's profitability.

The Supervisory Board was involved at an early stage in all fundamental decisions and was able to discuss these in advance with the Executive Board. Following careful examination, the Supervisory Board approved all measures requiring its approval by law, the company's Articles of Incorporation, or its own Rules of Procedure.

Supervisory Board meetings and attendance

In the 2022 financial year, the Supervisory Board held four scheduled and two extraordinary meetings. Five of these meetings were held by video conference and one as a physical meeting. Furthermore, one resolution was adopted by circulating the respective written documents.

The Audit Committee and the Personnel Committee held five and four meetings respectively in the year under report. Of the Audit Committee meetings, three were held as physical meetings and two by video conference. The Personnel Committee met three times by video conference and once in person. Consistent with the recommendation made by the German Corporate Governance Code, we disclose the attendance of members at the respective meetings.

Meeting attendance FY 2022

	Supervisory Board	Audit Committee	Personnel Committee
Dr. Peter Kurz, Chairman	6/6	–	4/4
Johannes Böttcher	6/6	–	–
Angelo Bonelli	6/6	4/5	4/4
Timo Carstensen	6/6	–	–
Sabine U. Dietrich	5/6	–	–
Detlef Falk	5/6	4/5	–
Martin F. Herrmann	6/6	5/5	–
Barbara Hoffmann	6/6	–	4/4
Heike Kamradt-Weidner	6/6	5/5	4/4
Gregor Kurth	6/6	5/5	4/4
Thoralf Lingnau	6/6	–	–
Dr. Lorenz Näger	6/6	5/5	–
Tatjana Ratzel	6/6	–	–
Thorsten Riehle	6/6	–	–
Andreas Schöniger (since 1 May 2022)	3/3	–	1/1
Susanne Schöttke	6/6	–	–
Bernhard Schumacher (until 30 September 2022)	6/6	–	–
Dr. Stefan Seipl	6/6	–	–
Christian Specht	6/6	–	–
Susanne Wenz	1/6	–	–
Jürgen Wiesner (until 30 April 2022)	3/3	–	3/3

At all regular meetings, the Executive Board informed the Supervisory Board about the Group's operating performance and also dealt in detail with the course of business in individual business fields. Any variances from the budget were particularly appraised and substantiated. One particular focus consistently involved the aspects of liquidity, movements in key figures and the development in the risk radar.

A further topic of regular discussion involved the implications of the war in Ukraine for the company's current and future business activities.

The Executive Board regularly informed us in writing about important topics, also in the periods between meetings.

A training event for Supervisory Board members was held again in the 2022 financial year. The focus here was on the topics of sustainability and green heat, as well as on more in-depth explanations of the impact of current market developments on all levels of the company's business activities and results.

Topics addressed by full Supervisory Board

At the meeting held on **3 December 2021,** we dealt in detail with the business results for the 2021 financial year and the Executive Board's dividend proposal. The auditor commissioned to perform the audit, namely PriceWaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PWC), Essen, provided us with extensive reports on the findings of its audit. Following due consultation in the Audit Committee and in-depth discussion, we acknowledged and approved this report. In the further course of the meeting we addressed and approved the resolutions to be submitted to the Annual General Meeting. Furthermore, we set the minimum variable remuneration thresholds for Executive Board members for the 2022 financial year and adopted the resolution to commission the auditor for the 2022 financial year. Moreover, we granted our approval for the acquisition by MVV Enamic GmbH of 100 % of the shares in AVANTAG Energy s.à r.l. and its associate Philipp Rass Energy GmbH.

At an unscheduled meeting on **23 December 2021,** we laid down rules governing the representation of the Chief Executive Officer, Dr. Georg Müller, during his longer period of illness-induced absence. In this context, we appointed Daniela Kirchner as a deputy member of the Executive Board on a temporary basis and entrusted her with commercial duties. We distributed the other relevant tasks among the other Executive Board members, also on a temporary basis.

On **10 March 2022,** directly before the Annual General Meeting, the Executive Board informed us about the course of business in the first three months of the 2022 financial year and the Group's current situation. We approved the investment budget to implement infrastructure measures at the site of the energy from waste plant on Friesenheimer Insel in Mannheim, as well as the EU-wide call for tenders for components required to obtain waste heat from various process with the aim of being able to feed this into Mannheim's district heat grid in future. Furthermore, our agenda also included two resolutions concerning the conclusion of company agreements and information about the topic of artificial intelligence and predictive data analysis. Finally, we also renewed the appointment of Dr. Hansjörg Roll as Technology Director on the Executive Board, in this case for the period until the end of December 2027.

In a resolution adopted by circulating the written documents, in **May 2022** we approved the acquisition of a piece of land and associated taking up of debt to enable a subsidiary to submit a binding offer for a construction project.

At the meeting on **2 June 2022,** the Executive Board again reported to us in detail on the course of business to date, offered insights into the results for the 1st half of the 2022 financial year and the outlook for the current financial year. The Executive Board provided us with an extensive report on major personnel-related topics, such as recruiting, new forms of cooperation and work safety. This was followed by information about IT topics, especially the challenges involved in hybrid cooperation and IT security. Furthermore, we discussed the results of the Supervisory Board self-assessment, which we performed in the 2022 financial year with support from an external consultant.

At an unscheduled meeting on **29 August 2022,** we dealt in detail with the planned sale of MVV Energie CZ a.s. and, following in-depth discussion, approved this project.

Alongside the presentation of the results for the first nine months of the 2022 financial year, the agenda for our meeting on **22 September 2022** included the current course of business, the challenging market situation and the business plan for the 2023 financial year, which we examined in great detail, particularly in view of the volatilities on the energy markets and relevant legislation. Furthermore, we addressed the three-year planning and the Declaration of Compliance with the German Corporate Governance Code, as well as approving the EU-wide call for tenders for components at a bio-waste anaerobic digestion plant. In addition, we adopted resolutions on remuneration-related issues previously discussed in the Personnel Committee.

Committee work

To improve the efficiency of the work performed by the Supervisory Board, many topics and resolutions due to be addressed in Supervisory Board meetings are discussed in advance and prepared by the relevant Supervisory Board committees. An overview of the committees can be found in the chapter Directors and Officers. The committee chairs keep the full Supervisory Board regularly and promptly informed about their activities. Any decisions due to be taken at the next Supervisory Board meeting are also discussed.

The **Audit Committee** held five meetings in the 2022 financial year. At these meetings, the committee dealt extensively with the respective quarterly results and discussed these with the Executive Board. In its deliberations, it focused on a thorough analysis and review of the annual financial statements of MVV Energie AG, the consolidated financial statements and the combined management report for the 2021 financial year, as well as on the financial reporting in the statements for the first three months, the first half and the first nine months of the 2022 financial year. Furthermore, the committee dealt with the company's risk situation and risk management on a quarterly basis.

Together with the Executive Board, the committee also discussed the company's 2023 business plan and its medium-term planning and strategic alignment. Following careful scrutiny, it recommended that the Supervisory Board should approve the budget for the 2023 financial year. Furthermore, the committee took receipt of supplementary reports from the company. It assured itself of the appropriateness, effectiveness and functionality of group internal audit, the internal control system (IKS) in respect of the financial reporting process and the compliance management system. Moreover, it determined the audit focuses for the 2022 financial year, which were then communicated to the auditor. Further topics discussed by the committee included the continuous monitoring of market situations and their implications, as well as the appropriateness of the measures taken by the Executive Board in this respect. No objections were raised to the post-calculations and final reports thereby submitted nor to the status reports for major projects or the presentation of business models that are new or currently in development. The Audit Committee closely accompanied the successful placement of a promissory note loan and registered bond in difficult market conditions in March 2022.

Further topics of extensive deliberation included relationships with the auditor, the proposal for the election of the auditor, its remuneration, audit engagement and the review of its independence. In addition, the Audit Committee prepared the call for tenders for the audit of the annual and consolidated financial statements and for further audit services at the MVV Group from the 2024 financial year. The aim of this process, which is still underway, is to submit a corresponding election proposal to shareholders at the Annual General Meeting in March 2024.

The **Personnel Committee** met on four occasions in the financial year under report and submitted its recommendations to the Supervisory Board. One focus of activity in the year under report involved preparing a proposal for the Supervisory Board in respect of a viable solution for the representation of the CEO, Dr. Georg Müller, during his extended illness-induced absence and the associated temporary appointment of a deputy member of the Executive Board. Furthermore, the committee discussed matters relating to the remuneration of Executive Board members and prepared the reappointment of the Executive Board Technology Director.

The **Nomination Committee,** the **New Authorised Capital Creation Committee** and the **Mediation Committee** did not hold any meetings in the year under report.

The Supervisory Board was kept regularly and extensively informed about the work performed by the committees.

Composition of the Supervisory and Executive Boards

Jürgen Wiesner retired from the Supervisory Board as of 30 April 2022 and was succeeded by Andreas Schöniger. Bernhard Schumacher stood down from his position as of 30 September 2022. He in turn was succeeded by Dr. Simon Kalvoda as of 1 October 2022. On 26 October 2022, Johannes Böttcher also retired from his position. He was succeeded by Erik Niedenthal, an elected substitute candidate. We would like to thank the members retiring from the Supervisory Board for their longstanding and trust-based cooperation.

The Chief Executive Officer, Dr. Georg Müller, was unable to discharge his duties for health-related reasons in the period from March to September 2022. His commercial duties were temporarily assumed by Daniela Kirchner, who was appointed as a deputy member of the Executive Board for that period. We assigned his other responsibilities to the three other members of the Executive Board on a temporary basis. Executive Board activities were coordinated by Dr. Hansjörg Roll. In view of this special situation, we increased the rhythm and intensity of the regular discussions between the Executive Board and the Supervisory Board Chairman.

Corporate governance

In the year under report, we again dealt closely with the recommendations and provisions of the German Corporate Governance Code (DCGK). As in previous years, we endorsed the Declaration of Compliance with the Code submitted by the Executive Board. MVV Energie AG fully complies with all but one of the recommendations made by the Code. We approved the Declaration of Compliance for the 2022 financial year at our meeting on 22 September 2022.

We conducted the self-assessment recommended by the Code with support from an external consultant in the 2022 financial year. The results were presented to the full Supervisory Board and then discussed. Overall, members assess the work performed by the full Supervisory Board and its committees as being highly efficient. We have acted on feedback received concerning measures to optimise the onboarding process for new Supervisory Board members.

Handling conflicts of interest and independence

All members of our Supervisory Board have undertaken to disclose without delay any conflicts of interest that may arise. No such conflicts arose in the year under report. We conducted a review and ascertained that all members of our body are independent in the sense defined in the German Corporate Governance Code.

Audit of annual and consolidated financial statements

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Essen, was elected as auditor of the financial statements for the 2022 financial year by the Annual General Meeting on 11 March 2022. The declaration of independence from the auditor has been submitted to the Supervisory Board.

The annual financial statements of MVV Energie AG for the 2022 financial year have been prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation (AktG). MVV's consolidated financial statements and combined management report have been prepared in accordance with International Financial Reporting Standards (IFRS) as applicable in the EU. The auditor audited the consolidated financial statements and combined management report of MVV and the annual financial statements of MVV Energie AG and granted unqualified audit opinions. Both the annual financial statements and the consolidated financial statements and combined management report for the 2022 financial year are published in the Federal Gazette (Bundesanzeiger).

The documents we required for our own audit, in particular the consolidated financial statements, combined management report, annual financial statements of MVV Energie AG, Executive Board proposal concerning the appropriation of profits and the auditor's audit reports, were provided to us in good time. Both the Audit Committee and the full Supervisory Board examined these documents carefully and extensively. We discussed them in detail in both bodies in the presence of the auditor. No objections were raised. At our meeting on 2 December 2022, we approved the consolidated financial statements and combined management report of MVV and the annual financial statements of MVV Energie AG. The annual financial statements are thus adopted. We endorsed the Executive Board proposal concerning the appropriation of profits. The auditor also audited the monitoring system established by the Executive Board pursuant to § 91 (2) AktG. The auditor determined that the system was suited to detect at an early stage any developments that could threaten the company's continued existence.

According to the Executive Board report on relationships with affiliated companies (Dependent Company Report) for the 2022 financial year, MVV Energie AG was not disadvantaged by the legal transactions performed with affiliated companies outlined therein. The auditor audited the Dependent Company Report and granted the following audit opinion:

"Following our audit and assessment performed in accordance with professional standards, we confirm 1. That the factual disclosures made in the report are accurate and 2. That the company's compensation in the transactions listed in the report was not incommensurately high." We received in good time both the Dependent Company Report and the associated audit report compiled by the auditor. Based on our own review, we concur with the auditor's assessment and approve its report.

Thanks

At the beginning of the financial year, no one could imagine that – basically inconceivable – global political events would have such a sustainable impact on our course of business and our everyday lives as is now the case due to the war in Ukraine with all its direct and indirect implications. We are all affected, both in our private lives and in the economy as a whole, by the sharp rise in inflation rates, ongoing disruptions to supply chains, turbulence on the energy markets and the permanent threat to the stability of the gas supply. Against this backdrop, the company's operating performance in the 2022 financial year deserves respect, particularly since this success was not achieved at the expense of our employees or our customers. It is rather the result of forward-looking planning and a farsighted and diversified strategy in which the decision to channel all our energy into decarbonisation has proven to be the right way forward and absolutely effective.

The whole of the Group's workforce and all shareholders can be proud of this success. On behalf of the entire Supervisory Board, I would like to thank you for your support and your commitment!

Dr. Peter Kurz
Chairman

Mannheim, December 2022

Share

Market situation

Sharp downturn follows record highs on stock markets

Developments on international stock markets in the period under report were chiefly influenced by the coronavirus pandemic, supply chain problems, the war in Ukraine, sanctions imposed on Russia, high inflation and more restrictive monetary policies on the part of central banks. Germany's lead index, the DAX, closed 2021 at 15,885 points, equivalent to a 15.8 % increase on 2020. In the wake of what had been the worst global economic crisis for decades due to the coronavirus pandemic, investors set their sights on a strong economic recovery in 2021. Stock markets were further buoyed by extensive economic aid and stimulation packages introduced by many countries, as well as loose monetary policies at central banks. This rally continued at the beginning of 2022, with the DAX closing at 16,271 points, its highest level ever, in early January. Following Russia's attack on Ukraine, the DAX came under pressure. This was caused above all by the rise in commodity prices triggered by the war, especially for oil and gas, a development which further fuelled global inflation. The turnaround in base rates initiated by the US Federal Reserve led other central banks to review their low-interest policies and attempt to contain inflation by raising rates. Falling growth forecasts produced a sustainable downturn in stock markets, with high-valued large technology stocks in particular witnessing downward corrections. Fears of stagflation, i.e. economic stagnation with high inflation, or even a recession, spread among investors. In the further course of 2022, the DAX continued to fall, accompanied by significant fluctuations. It closed at 12,114 points, 20.6 % lower than one year earlier.

Key figures on share and dividend of MVV Energie AG from 1 October to 30 September

		FY 2022	FY 2021
Closing price at 30 September [1]	Euro	28.80	32.00
Annual high [1]	Euro	37.20	32.60
Annual low [1]	Euro	27.80	25.00
Market capitalisation at 30 September	Euro million	1,898	2,109
Average daily trading volume	No. of shares	2,822	4,374
No, of individual shares at 30 September [2]	000s	65,907	65,907
Dividend per share [3]	Euro	1.05	1.05
Total dividend [3]	Euro million	69.2	69.2
Adjusted earnings per share [4, 5]	Euro	2.67	2.28
Cash flow from operating activities per share [5]	Euro	14.45	18.26
Adjusted carrying amount per share [5, 6, 7]	Euro	23.94	21.67
Price/earnings ratio [8]		10.8	14.0
Price/cash flow ratio [8]		2.0	1.8
Dividend yield [8]	%	3.6 [3]	3.3

1 XETRA trading

2 Number of shares at 30 September corresponds to weighted annual average

3 Subject to approval by Annual General Meeting on 10 March 2023

4 Excluding non-operating measurement items for financial derivatives, excluding structural adjustment for part-time early retirement, excluding restructuring result and including interest income from finance leases

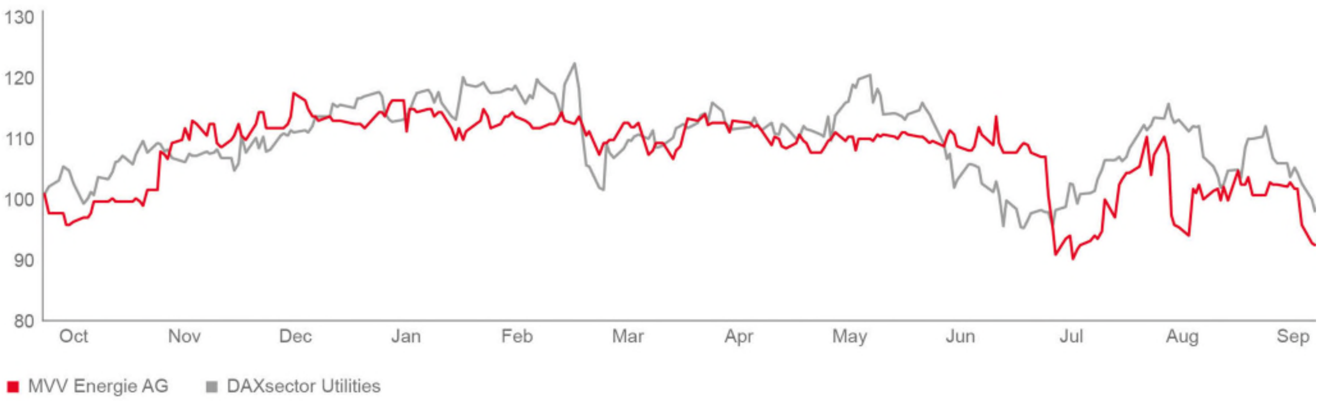
5 Number of shares (weighted annual average)

6 Excluding non-operating measurement items for financial derivatives

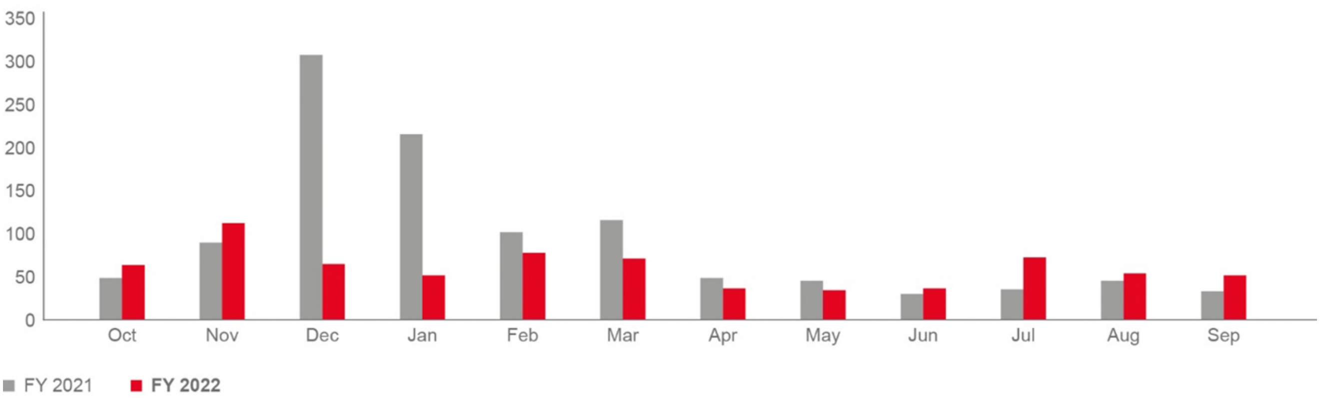
7 Excluding minority interests

8 Basis: closing price in XETRA trading at 30 September

MVV ENERGIE AG SHARE PRICE PERFORMANCE COMPARISON FY 2022
(%)



MONTHLY SHARE TURNOVER
(no. of shares in 000s)



MVV's share

Share price falls

The MVV Energie AG share was listed at Euro 28.80 on 30 September 2022, corresponding to a 10.0 % reduction compared with its price of Euro 32.00 on 30 September 2021. Including the distribution of a dividend of Euro 1.05 per share in March 2022, our share price fell year-on-year by 7.2 %. The DAXsector Utilities, the comparative index for the energy industry, fell by 3.1 % over the same period. In the share price performance chart, we include our dividend payment in line with the calculation of the comparative index.

Lower market capitalisation and reduced trading volumes

The reduction in the share price also lowered our market capitalisation, which fell from Euro 2,109 million at the previous year's balance sheet date to Euro 1,898 million at 30 September 2022. The 4.8 % free float accounted for a market capitalisation of around Euro 91 million (previous year: Euro 102 million). Around 0.7 million MVV Energie AG shares were traded in total on all German marketplaces in the 2022 financial year, 34.9 % less than in the previous year. Accordingly, the equivalent value of trading volumes also decreased, in this case to Euro 24 million (previous year: Euro 28 million).

Dividend remains stable

The Annual General Meeting on 11 March 2022 accepted the proposal from the Executive and Supervisory Boards and approved the distribution of a dividend of Euro 1.05 per share for the 2021 financial year, corresponding to an increase of Euro 0.10 per share. Based on 65.9 million outstanding shares, the distribution sum totalled 69.2 million (previous year: Euro 62.6 million).

We intend to pay a dividend to our shareholders that is aligned to MVV's earnings performance in future as well. In view of this, the Executive Board has decided to propose a dividend of Euro 1.05 per share again for approval by the Annual General Meeting on 10 March 2023. Should the Annual General Meeting approve this dividend proposal, then this would correspond to a dividend yield of 3.6 % based on the closing price of MVV's share in XETRA trading on the balance sheet date on 30 September 2022.

Data on MVV Energie AG share	
Stock exchanges	XETRA Frankfurt, Official Trading in Frankfurt and Stuttgart, Free Trading in Berlin, Düsseldorf and Hamburg
Transparency level	Prime Standard
Market segment	Regulated Market
Index membership	Prime All Share, CDAX, DAXsector Utilities
ISIN International Security Identification Number	DE000A0H52F5
WKN Security Identification Number	A0H52F
Symbol	MVV1
Reuters Instrument Code	MVVG
Bloomberg Symbol	MVV1:GR
Share category	Individual registered shares (ordinary shares); prorated share of share capital per individual share: Euro 2.56
Share capital	Euro 168,721,397.76
Share capital (no. of shares)	65,906,796
Date of initial listing	2 March 1999

Our investor relations activities

In the year under report, we explained to institutional and retail investors how we have further developed our strategy and our business model. We are also always available for questions and suggestions from our shareholders. Upon the publication of our half-year and full-year results, the Executive Board commented on our company's latest business performance at analysts' conferences. We make recordings of analysts' conferences and the accompanying analysts' presentations available to the public on our website at **www.mvv.de/investors.**

Currently, the MVV Energie AG share is covered by one financial institution: Landesbank Baden-Württemberg. As of 30 September 2022, the analyst recommended holding our share with a target price of Euro 36.00.

Combined Management Report

Group Fundamentals

GROUP STRUCTURE

Company structure and shareholdings

As the publicly listed parent company of the MVV Group, MVV Energie AG, which has its legal domicile in Mannheim, directly or indirectly owns shares in the company which form part of the Group and also has its own operations. Including MVV Energie AG, the MVV Group comprises 131 fully consolidated companies and 32 companies which are consolidated via the equity method (at-equity companies). Our group of companies has its largest locations in Mannheim, Kiel, Offenbach and Wörrstadt in Germany. We are also present in around 20 other countries, of which the United Kingdom and the Czech Republic are the most important.

Organisational structure

We manage MVV in five segments on which we also base our external reporting:

The **Customer Solutions** reporting segment comprises the business fields of Retail, Business and Commodities.

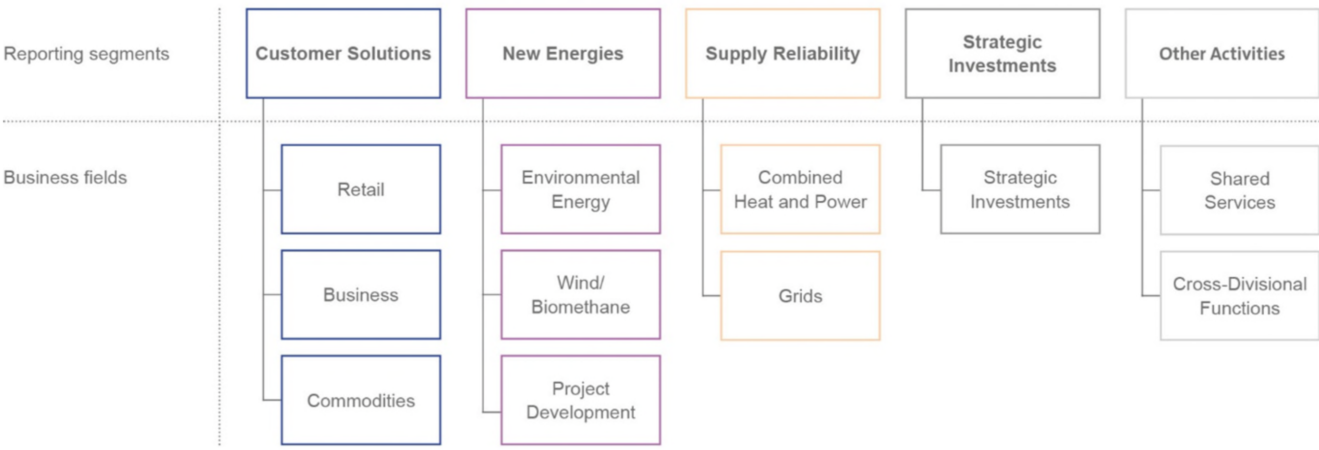
The Environmental Energy, Wind/Biomethane and Project Development business fields are allocated to the **New Energies** reporting segment.

The **Supply Reliability** reporting segment includes the Combined Heat and Power and the Grids business fields.

The **Strategic Investments** reporting segment mainly consists of Köthen Energie and MVV Energie CZ and also includes the at-equity result of Stadtwerke Ingolstadt.

Our shared-service companies and cross-divisional functions are pooled in the **Other Activities** reporting segment. The shared-service companies perform services such as metering, billing, IT and customer service for MVV.

REPORTING SEGMENTS AND BUSINESS FIELDS



BUSINESS MODEL

We cover all key stages of the energy industry value chain and, based on calculations compiled by the Association of the German Energy and Water Industries (BDEW), are one of Germany's leading energy companies. We generate and trade with energy, distribute energy via proprietary grid companies, market energy solutions to various customer groups and operate in the environmental energy business. We also have water production and distribution activities. We have a special focus on renewable energies. Here, we are active in the fields of project development for wind turbines and photovoltaics systems and operations management for windfarms and solar parks, as well as for biomass plants. Furthermore, we also have these kinds of plant in our own generation portfolio and market electricity from these plants and on behalf of third parties, also via power purchase agreements (PPAs) and power sale agreements (PSAs).

Customer Solutions segment

The Customer Solutions reporting segment includes the energy and water retail and wholesale businesses. Here, we aim to provide our customers with energy from environmentally-friendly generation. That is why we have a broad range of products and services meeting ecological standards – from renewable energies through to environmentally-friendly district heat – that we offer to our retail and business customers. This also includes the portfolio of solutions we offer to enable customers to generate their own electricity from photovoltaics and power their own e-mobility. In addition, e-mobility is an integral component of our activities in Smart Cities, where we act as a system partner to local authorities and offer networked solutions for towns and cities. Our range of solutions for business customers focuses on projects and measures to enhance efficiency and optimise energy use at industrial, retail and real estate customers. The Customer Solutions segment also includes the commodities, service and trading business at MVV Trading, where we pool energy procurement, energy product trading, marketing electricity from renewable generation, also in PPA/PSA models, and portfolio management for our group of companies. We also offer all these services to third-party customers on the market. Moreover, our trading subsidiary is also responsible for the renewable energies direct marketing business.

New Energies segment

In the New Energies reporting segment we on the one hand pool our competence in making ecological use of waste and biomass. We draw on this expertise not only at our plants in Mannheim, Offenbach, Leuna, Königs Wusterhausen and Flörsheim-Wicker, but also in the United Kingdom, where we operate an energy from waste plant with heat extraction in Plymouth, a biomass power plant with CHP capability at Ridham Dock and an energy from waste plant in the Scottish city of Dundee. In Germany, we also have biogas and biomethane plants, including bio-waste anaerobic digestion. On the other hand, the New Energies segment also contains our proprietary wind turbines and photovoltaics systems, as well as our national and international project development business. The focus in the international business is on photovoltaics, while in Germany onshore wind power is an additional focal point. Furthermore, we act as operations managers for windfarms and solar parks and develop hybrid projects in which, depending on requirements, we supplement various energy systems such as photovoltaics or wind turbines with storage units and manage these using smart measurement and control technology.

Supply Reliability segment

The Supply Reliability reporting segment includes our generation portfolio for conventional energies with CHP. These include our gas-fired CHP plant in Kiel, our CHP plant in Offenbach and our minority shareholding in the power plant Grosskraftwerk Mannheim AG. High-performing grids are crucial to guarantee a reliable supply of energy and water and to implement the energy transition. For this reason, this segment also includes the grid business at our distribution grid operators in Mannheim, Kiel and Offenbach. All in all, within the MVV Group we operate electricity, district heat, gas and water grids with a total length of around 19,300 kilometres.

CORPORATE STRATEGY

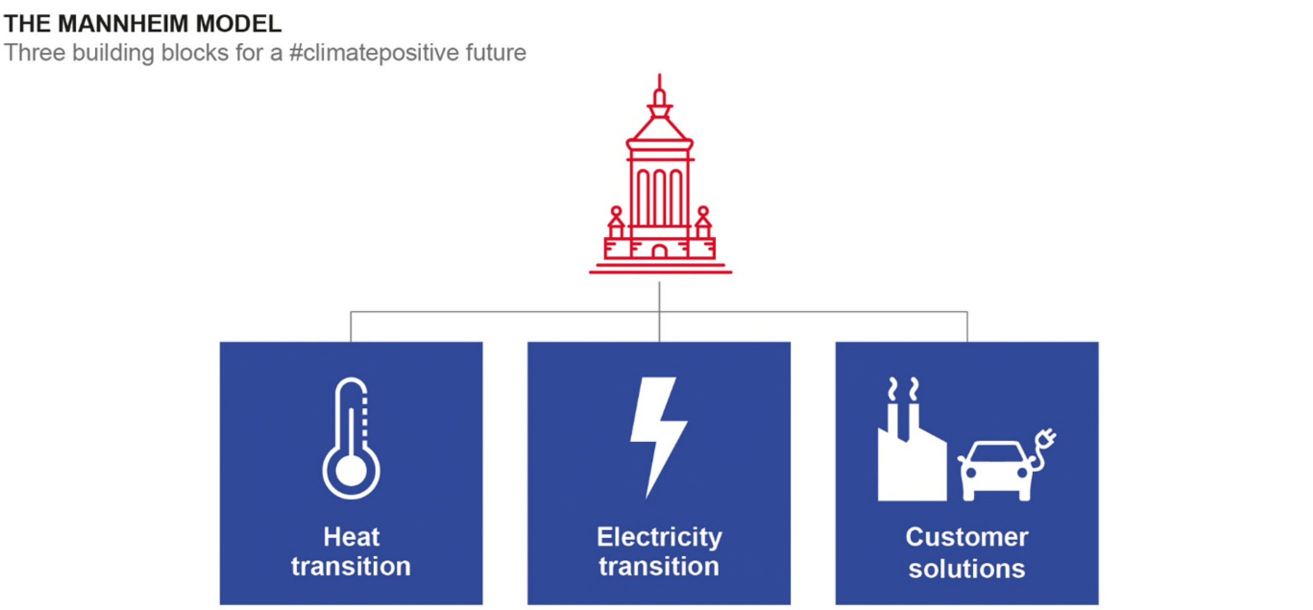
Sustainability is firmly anchored in our strategy
Sustainability is at the heart of our strategy. By 2030, we will reduce our direct CO_2 emissions by more than 80 %. We will be climate neutral by 2040 and climate positive at the latest from then onwards. In our communications, we summarise this approach with the hashtag #climatepositive. Put simply, our future is #climatepositive. That is the goal which our employees, who total more than 6,500, work each day to achieve. We are consistently pursuing our strategic sustainability targets: doubling our electricity generation from renewable energies, achieving capacities of 10 GW in our renewable energies project development, investing more than Euro 3 billion by 2026, implementing the energy transition for our customers and complying with the agreed climate targets. The section Environmental Concerns Aspect in the chapter Combined Non-Financial Declaration provides further information about our activities in these areas. We are implementing these targets by investing in green heat, stepping up our expansion of renewable energies, smartly extending our grid infrastructure and continually assessing the efficiency potential of our processes. Implementing the energy transition – tangibly and on location – is what distinguishes MVV from its competitors and enables us to generate sustainable and profitable growth.

The knock-on effects of the war in Ukraine mark a turning point towards greater independence and resilience in the energy system in Germany and Europe. You can find further information in the chapter Business Framework. Safeguarding the supply has become more important than ever and has top priority for MVV as well. In this dynamic environment, we remain emphatically committed to our climate targets. We will offset the temporary increase in our CO_2 emissions now required by stepping up our efforts to cut emissions in the medium term. This way, we will remain on the 1.5-degree trajectory. Extensive information about this can be found in the chapter Combined Non-Financial Declaration.

By consistently aligning our strategy towards sustainability, we laid the right foundations many years ago already. We are well prepared and can therefore further step up our activities and press rapidly ahead with implementation.

Our Mannheim Model provides the blueprint
The Mannheim Model sets out MVV's course as it heads for #climatepositive, a goal which Kiel and Offenbach are also working towards. Based on an 8-point programme with clear milestones, Stadtwerke Kiel is pursuing its "Climate Neutrality Course". Energieversorgung Offenbach has clearly formulated its aim of achieving climate neutrality by 2040 in connection with the company's 175th anniversary and is currently elaborating this goal in greater detail.

The Mannheim Model – our path to the future



We are pressing ahead with the heat transition
Our customers are crucial to implementing the heat transition. All customers at our locations are able to convert their heat supply to climate-compatible alternatives. To this end, by 2040 we will expand our district heat grids and increase their density, transform gas grids, remove parallel grid structures and strengthen electricity grids to meet growing demand, especially from heat pumps and e-mobility. Particularly in Mannheim, we are accelerating our measures to increase the density of district heat and, in select areas, are reviewing the option of withdrawing from gas in order to remove duplicate infrastructures. Mannheim's connection to the European hydrogen transport infrastructure is also planned for 2030. In this context, we are reviewing options for using hydrogen and of converting natural gas grids to hydrogen and green gases, particularly for industrial customers.

We are stepping up sales of heat pumps and decentralised solutions in order to tap market potential and support our customers in implementing their own heat transitions. Here, we aim to extend our value chain by forming partnerships with heat pump manufacturers and tradespeople. We also plan to increase the depth of service provision in the grids business. This is intended, among other aspects, to safeguard implementation of the heat transition while at the same time boosting our services business and providing bespoke solutions for our customers.

We have clear ideas as to how we intend to convert our district heat generation portfolio in Mannheim, Kiel and Offenbach, but also remain open to adjustments. We will further develop green heat generation in Mannheim by, among other measures, building one of Europe's largest river heat pumps, connecting our biomass CHP plant, using additional waste heat from waste incineration and drawing on heat from deep geothermal energy. At the same time, we are continually reviewing further alternatives: green heat from electrode boilers (power-to-heat), biomethane-powered combined heat and power generation, further large-scale heat pumps and industrial waste heat.

We are implementing the electricity transition
We are expanding our generation capacities from renewable energies to 800 MW by 2026, particularly by adding onshore wind turbines and photovoltaics capacities. Together with partners, we are investing in renewable energies and, thanks to joint ventures with Stadtwerke Kiel, can accelerate the expansion in renewable energies in Schleswig-Holstein. We pooled our project development capacities in the 2022 financial year. The international project development business is being stabilised and the domestic business expanded. In this, we are actively participating in innovation tenders and making increasing use of power purchase agreements (PPAs). In our pilot project in Stassfurt, we will work together with regional partners to produce hydrogen from wind power and then make this available for regional use in rural areas.

We are partners to our customers
We aim to inspire our customers with the standard of our customer service and our portfolio of products and services, to convince them and to achieve high levels of customer satisfaction. We therefore intend to make our customers the focus of all our employees' activities even more closely than to date. To this end, we have initiated the "Create a Wow!" customer satisfaction programme.

We also intend to offer solutions to all customers to support them in implementing their own energy transitions. Here, electrification has a major role to play. Our approach covers the portfolio of solutions offered to business customers by MVV Enamic, products for decentralised energy solutions in our sales activities with retail and commercial customers, energy trading and portfolio management at MVV Trading and trade and other services for third parties. One important aspect involves dovetailing sales activities and underlying processes for these solutions components, including data centres, as well as extending the sustainability advice we provide to business customers. In parallel, we are promoting nationwide renewable energies growth based on retail customer solutions, with our Beegy subsidiary acting as the nucleus for these activities, and building cooperations with tradespeople to support implementation of these solutions. This way, MVV aims to secure installation and service capacities on the market. In Offenbach, we are also building the 110kV grid to cover increased service demand in this large built-up area.

Our future: #climatepositive
We are establishing innovative and sustainable solutions for the circular economy. Two key ways in which we intend to implement our climate targets involve making sustainable use of non-recyclable materials as resources and energy and exploiting additional district heat potential at all our locations. To help build a circular economy, we recycle phosphorous from sewage sludge and, in a pilot project, are producing biomass carbonate using pyrolysis. We will gradually turn our climate targets into reality by building a pilot carbon capture facility for our energy from waste plant in Mannheim, forging partnerships for potential CO_2 use and storage, recovering CO_2 in bio-waste anaerobic digestion and biomethane plants and implementing a CO_2 sink based on biomass carbonates in this field of activity as well. In the UK, we plan to implement further energy from waste plants and extend our existing portfolio of plants.

We are boosting our fitness for the future
One key success factor that will assist us in achieving our targets is a new world of work. We are becoming more dynamic and flexible and promoting mobile work. Examples here are home office provisions, desk-sharing concepts and hybrid work in teams based on new technical options, not least to protect the health of our employees during the coronavirus pandemic. We have implemented all these measures in the past two years and will work consistently to develop them further.

We are building structures that are fit for the future. In this context, our Soluvia IT-Services (SIT) subsidiary, for example, already launched ReThink SIT in October 2020. This reorganisation programme is intended to make the company fit for the future as an agile and scalable IT service provider. To this end, we are enhancing structures, processes and service customisations. We are also introducing an extensive change programme that focuses on targeted training measures for employees and cultural changes. We started implementing this reorganisation concept in January 2022.

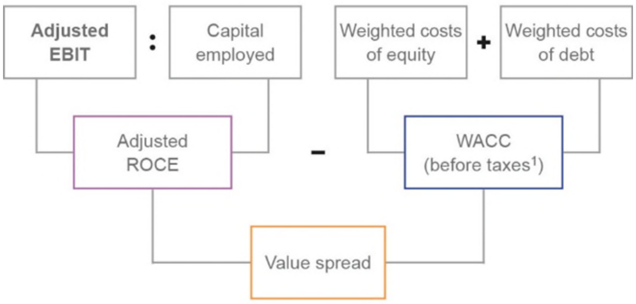
In addition, we are continually working to further develop our IT protection measures and provide training on potential cyber-threats. In digitalising our business, we are basically taking a decentralised approach in which business fields and their units are themselves responsible for implementing digitalisation. Central departments offer support in this and networks are built to share experience and information. We are consistently seizing potential improvements offered by digitalisation and process enhancement, whether these involve optimising applications, further developing mass processes or overarching cloud migration.

In the 2022 financial year, we also further developed our employee and management development activities by redesigning management feedback and expanding the range of virtual training options on offer. We see diversity as an opportunity and are promoting this with measures such as our “Energy for Diversity” programme. Further information can be found in the section Employee Concerns Aspect in the chapter Combined Non-Financial Declaration.

VALUE-BASED CORPORATE MANAGEMENT

Our value-based corporate management has the objective of sustainably increasing MVV's value and offering an attractive dividend to our shareholders. We achieve this by generating a positive value spread, i.e. by ensuring that the adjusted return on average capital employed (adjusted ROCE) is higher than the costs of capital (WACC). The most important parameter in this respect is adjusted operating earnings before interest and taxes (adjusted EBIT). We adjust this key earnings figure to eliminate earnings items resulting from the measurement of financial derivatives pursuant to IFRS 9 as of the reporting date, items resulting from the structural adjustment for part-time early retirement and, if applicable, restructuring expenses. We add interest income from finance leases, which is reported in financing income, to our adjusted EBIT. This income results from contracting projects and therefore forms part of our operating business.

CALCULATION OF VALUE SPREAD
(simplified presentation)

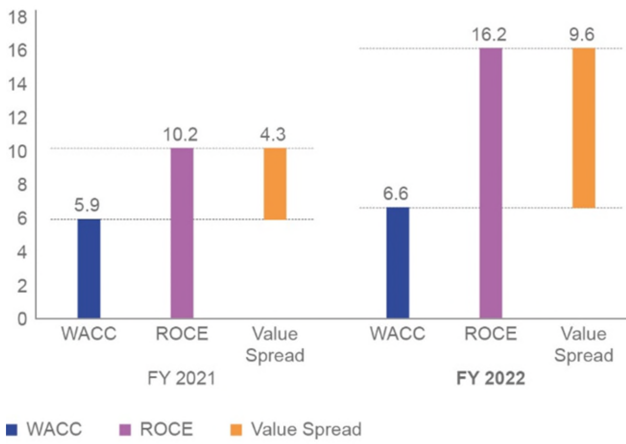


1 WACC before taxes = WACC after taxes/0.7

We reviewed the individual parameters used to calculate the WACC figure relevant to MVV for the year under report and partly updated these to account for market changes.

On this basis, we calculated equity costs after taxes of 6.9 % (previous year: 6.3 %) and debt costs after taxes of 1.1 % (previous year: 1.2 %). The capital structure of MVV's peer group amounts to 59.8 % for equity (previous year: 55.7 %) and to 40.2 % for debt (previous year: 44.3 %). The Group tax rate is unchanged at 30 % (previous year: 30 %). The WACC calculated on this basis for the 2022 financial year stands at 4.6 % after taxes (previous year: 4.1 %) and at 6.6 % before taxes (previous year: 5.9 %).

KEY VALUE MANAGEMENT FIGURES
%



The ROCE rose from 10.2 % to 16.2 % in the 2022 financial year. One factor driving this increase was adjusted EBIT which, mainly as a result of disposal gains, rose significantly in the 2022 financial year. A further key driver was the reduction in capital employed. This was due above all to the increase in cash and cash equivalents by Euro 627 million on account of the high inflows of funds for security deposits for counterparty default risk (margins). One half of this increase has been deducted for the purpose of calculating average capital employed.

Following the subtraction of WACC before taxes of 6.6 %, the increase in ROCE led the value spread to rise to 9.6 %. In the previous year, this key figure amounted to 4.3 %.

TECHNOLOGY AND INNOVATION

Innovative research and development

We have set ourselves the goal of developing smart energy products and innovative solutions that meet our customers' needs. Our efforts to meet this objective are driven among other areas by our Customer Experience and Innovation department. Here, innovation managers and market researchers work on research and development projects, as well as on specific projects aimed at increasing customer satisfaction in which colleagues from our operating business fields are also involved. Moreover, our operating units and our Digital City department are also independently involved in forward-looking projects. As a result, the development expenses for technology and innovation are not fully reflected in the research and development expenses reported in accordance with IFRS.

Current projects

Networked solutions based on LoRaWAN
Our Digital City MVV Smart Cities department supports municipal utility companies and local authorities in developing digital infrastructures with smart technologies based on the Internet of Things (IoT). These are intended to enhance urban infrastructures and promote sustainable urban development. Networked IoT architectures also facilitate the efficient implementation of legislative and regulatory requirements. Key instruments deployed here are the MVV data platform specially developed for this purpose and an integrated LoRaWAN wireless network that ensures energy-efficient and secure data transmission.

One example: The requirements of the German District Heat or District Cooling Consumption Metering and Billing Ordinance (FFVAV), which came into effect in October 2021, can be implemented on this basis. Newly installed heat meters can be read on a remote basis and transmit consumption data via the LoRaWAN network to MVV's data platform. From there, the data is prepared and fed into downstream billing systems. This way, we can provide all district heat customers with a precise monthly bill including their actual consumption data.

Mannheim developing into a smart city
With our joint venture sMArt City Mannheim GmbH, we began work in the 2022 financial year on the operative implementation of the targets we have set ourselves.

In the area of decarbonisation, we identified potential spaces to develop ground-mounted photovoltaics projects and checked whether any restrictions applied. These potential spaces are now being processed by surveyors. Alongside ground-mounted photovoltaics systems, various rooftop photovoltaics systems have also been planned and in some cases already implemented. As well as numerous smaller systems on schools and kindergartens with a customary size of 30 kW_p, larger systems are also being built on a 100 kW_p scale. The systems commissioned by the end of the 2022 financial year have total capacities of 1 MW_p. Further systems on properties owned by the City of Mannheim are in the project pipeline.

One special photovoltaics project in Mannheim is being prepared for the roof of the "U-Halle", the central exhibition building for the 2023 Federal Garden Show. On two sections of the hall, we are building a photovoltaics system with installed capacities of nearly 1 MW. Once operations are launched, we will hand this over to the City of Mannheim in turnkey condition. Various units of the Group are working closely together to ensure that operations can be launched on schedule ahead of the opening of the 2023 Federal Garden Show. As well as our Avantag subsidiary, which is seeing to the planning and construction of the system, MVV Grids is responsible for refurbishing the roof, civil engineering work and connecting the system to the grid, while MVV Energie and sMArt City Mannheim are dealing with the stakeholder and project management.

Alongside these decarbonisation activities, one key focus is on the sMArt roots project for the City of Mannheim, which is being supported by the Federal Ministry for Housing, Urban Development and Building (BMWSB). The project is drawing on solutions devised by MVV Smart Cities. On the one hand, existing solutions from the Internet of Things (IoT) are being used while, on the other, new solutions for the smart city are being developed together with the City of Mannheim and its companies with the aim of exploiting digital opportunities in the fields of energy, transport and resources. At present, a climate measurement network is being installed to record microclimatic conditions in Mannheim. On this basis, we will derive a climate model that simulates the impact of climate change on urban space and additionally portrays the effects of intervention measures.

In addition to these, further projects in the fields of mobility and resource handling are also being implemented. We will draw on the insights gained and solutions arising as a result to expand our product portfolio.

Furthermore, sMArt City Mannheim is accompanying the City of Mannheim in developing its smart city strategy. Here, MVV is contributing insights in the field of data management, especially data security and data protection.

Smart networking at “SynergieQuartier Walldorf”
Launched on 1 July 2020, the three-year research project “SynergieQuartier Walldorf” has the goal of optimising grid operations for additional loads resulting from decentralised electricity generators and consumers, such as photovoltaics systems, battery storage facilities, charging points and heat pumps. The project is being supported by the Federal Ministry for Economic Affairs and Climate Action (BMWK) and carried out together with the Karlsruhe Institute of Technology (KIT), the FZI Research Center for Information Technology, Stadtwerke Walldorf and our subsidiary Beegy.

The project has attracted 27 pilot households that are customers of Stadtwerke Walldorf and participate with photovoltaics systems and in some cases heat pumps or charging points. The also received access to Beegy’s energy management system and the smart charging app HERMINE and are being equipped with smart meter gateways during the project. Since the beginning of 2022, various field trials have been performed to investigate the impact of new loads and generation facilities on a distribution grid. One key focus involves grid loads that are called up due to optimised charging processes that account for variable electricity prices. In dialogue formats, project participants are regularly questioned about their own experiences and needs. These can then be factored into the further course of the project.

Hydrogen and green gases: a new market is arising
Hydrogen is playing an ever-greater role in energy policy. The Federal Government aims to install electrolysis capacity of 10 GW by 2030, a target that may be further raised in the announced update to the National Hydrogen Strategy. In the amendment to the German Renewable Energies Act (EEG) adopted in the “Easter Package”, two tender segments were newly created to promote both hydrogen storage and electricity generation using hydrogen. Moreover, depending on their capacity new CHP plants will in future also have to be able to work with hydrogen (H_2-ready). The amendment to the German Energy Industry Act (EnWG) in the “Easter Package” further establishes that the construction of hydrogen pipelines is a matter of overriding public interest – initially for a limited period until the end of 2025 – and strengthens the need for transport infrastructure within the definition of aims meriting public protection. This in turn may speed up planning and approval processes.

In our “Hydrogen Programme”, we have established a team within the MVV Group that will promote the exchange of information about hydrogen, ensure cross-departmental cooperation for hydrogen enquiries and safeguard the transfer of expertise to individual units. By planning the Stassfurt Energy Region, we are already implementing an initial pilot project. Part of the wind power generated by a windfarm to be newly built with a capacity of 36 MW is to be converted into hydrogen using a 1 MW electrolysis plant. The hydrogen is to be used above all in regional mobility and the heat supply. The project is being developed in close cooperation with the regional partners Stadtwerke Stassfurt, Erdgas Mittelsachsen and Stassfurt Town Council.

MVV’s subsidiary Juwi is pursuing a further approach together with the Mannheim industrial company LANXESS. This special chemicals group intends to become climate neutral by 2040. A feasibility study is being compiled to ascertain how green hydrogen can be produced at the Mannheim site to supply the LANXESS plants in future. Initial findings should be available by the end of 2022.

EU project NUDGE: using incentives to achieve greater energy efficiency
Launched in 2020, the EU project NUDGE aims to reduce private energy consumption and optimise own use of proprietary solar electricity by providing non-monetary incentives, known as “nudges”. Nudging is a strategy to motivate people to change their behaviour, for example, as in the present case, to make more efficient use of energy or avoid using it at all.

NUDGE comprises five pilot projects being carried out with different focuses across Europe. More than 100 households in Mannheim and the region are taking part in the German pilot project. What all participants have in common is that they use self-produced electricity from their photovoltaics systems. They have access to a web portal providing them with information about their individual energy balance sheets. Around half the pilot households also have charging points and electric vehicles. These households additionally have access to smart charging management via the smartphone app HERMINE.

The project is subdivided into a pre-intervention phase and three nudging phases. In the year under report, the basic data of participating households was initially collected in the pre-intervention phase. In Nudging Phase 1, pilot customers were then provided with the first incentives in the web portal and the HERMINE charging app. The primary focus in this phase was to obtain greater transparency about individual energy situations. This phase was completed at the start of July 2022 with an online survey in which supplementary data was collected about energy consumption behaviour, the customers’ experience with energy applications and individual attitudes to energy-related issues.

The second nudging phase began in July 2022. Here, the customers were offered additional functionalities in the two applications as an incentive. Pilot customers can compare their current energy statistics with the previous year's figures. Moreover, they are provided with tips as to how to use surplus solar power in the next one to three days. The HERMINE charging app also includes new notifications and functionalities particularly enabling customers to monitor the charging process.

The third and final nudging phase is set to take place from November 2022, with additional nudges currently being developed and tested for this purpose. The results will be analysed and documented. Based on the findings, proposals will then be derived for future measures and directives, as well as for country-specific recommendations.

Progress in expanding charging infrastructure at our locations

Another area in which we are taking the same course as the City of Mannheim is in structuring the transport transition and expanding the range of e-mobility solutions. Since early summer 2019, we have installed and launched operations with more than 160 electric vehicle charging points in Mannheim and region, most of which funded by federal grants from the charging infrastructure subsidy programme. Within the "TENK Network", all our charging points are connected with further charging infrastructure across other towns in the Rhine-Neckar metropolitan region. We are also continuing to expand our own charging network. By the end of 2022, we will make more than 200 public charging points available in Mannheim. This expansion has two key focuses: On the one hand, by increasing the density of the existing alternating current (AC) normal charging infrastructure we aim to ensure that charging infrastructure is within walking distance in all districts of Mannheim. On the other hand, we are pressing ahead with expanding direct current (DC) rapid charging points. Here, we also plan to install high power charging (HPC) hubs. With high charging capacities of around 300 kW, these significantly reduce the time needed for charging processes while also making it possible to charge larger vehicle classes, such as e-trucks. We opened the first rapid charging park at the P 4 car park at Mannheim's central railway station in September 2022. Here, a total of five HPC charging stations with two charging points each are now in operation.

Our subsidiaries and shareholdings are making consistent progress in expanding their charging infrastructure as well. In the 2022 financial year, Energieversorgung Offenbach built three new charging stations in Mainhausen and two further charging stations in Seligenstadt, where 14 charging points were already installed in the previous year. In the year under report, Stadtwerke Kiel added 18 charging points at four locations. The company thus now operates a total of 78 public charging facilities with 155 charging points at 50 locations. Stadtwerke Ingolstadt currently operates around 70 charging points in Ingolstadt, of which 4 rapid charging stations with charging capacity of 300 kW each. In the past year, the expansion nevertheless focused above all on private and company charging infrastructure. In parallel, specific planning is underway for a rapid charging park at the IN-Campus site. This will initially have 16 rapid charging points that can be extended in line with future requirements.

Making Mannheim's traffic smart

We are supplementing our e-mobility services with smart technologies. Today already, most public charging points in Mannheim are equipped with modern parking space sensors working with long-range wireless technologies and linked up to MVV's data platform. These sensors can detect whether charging points are occupied regardless of whether a vehicle is actually connected to the point with a cable or the space is otherwise occupied. This makes it possible to drive directly to the infrastructure and lowers the volume of traffic on the lookout for vacant charging opportunities.

Furthermore, thanks to the successful completion of the subsidised MaVI project, vehicles are automatically counted and allocated to the correct class with the assistance of smart sensors located around downtown Mannheim and on access roads. The data thereby collected is combined with environmental and weather data. This way, predictions can be made as to the level of pollution. Close cooperation with the City of Mannheim and transport companies should make it possible in future to offer alternatives to private transport, particularly on days for which high levels of particular pollution are predicted.

Stadtwerke Kiel receives Silver for AI project at STADTWERKE AWARD 2022
Stadtwerke Kiel is actively deploying artificial intelligence in its "Customer segmentation & active customer targeting using AI" project. This software supports the company's sales staff in the large numbers of customer calls they take by offering additional information about their customers. The artificial intelligence divides the customers into various categories and, based on data analysis, can determine the focus of advice and suitable individual products and services for the respective customer. By improving individual customer targeting measures, the AI-assisted project makes it possible to address customers efficiently.

Innovative wind and storage project connected to grid
In June 2022, Juwi connected a wind and storage project to the grid, the first and to date only project of its kind in Germany to be selected in an innovation tender. The project is located in the district of Randowtal in the Uckermark region of Brandenburg. In the past year, the Schmölln II windfarm was already extended by two wind turbines with a capacity of 3.6 MW each. In spring 2022, the lithium-ion storage facility with a capacity of 3 MWh was then also installed. The storage system offers greater flexibility in terms of feeding in electricity, which means, for example, that additional electricity can be fed into the grid during periods of low wind volumes. The wind and storage combination is being operated by the Hamburg-based CEE Group, which acquired the first three turbines at the windfarm in 2018 already.

Innovation processes

Successful special ideas management campaigns
Our ideas management programme is allocated in organisational terms to the Personnel and Cultural Development department. It is intended to actively involve our employees in the continuous improvement process and raise their awareness of permanent change.

Thanks to two special campaigns, one tackling 150 years of ideas management in Germany upon the anniversary and the other, in line with our corporate strategy, dealing with customer focus, we received numerous new proposals for solutions in the year under report. We completed 351 proposed improvements in the 2022 financial year. By implementing these ideas, we achieved savings of Euro 101 thousand in the first year alone. We distributed bonuses of 32 thousand to the relevant employees. The multiyear benefit (four years) of the proposals implemented in the year under report currently amounts to Euro 238 thousand.

Tapping the entrepreneurial potential of our employees
The "Ready for Take-Off" initiative, which was launched in March 2021 already and continued in the year under report, aims to activate the potential available among our employees and boost our culture of innovation by offering numerous impulses to trigger creativity and innovation. Around 700 colleagues took part in the events in total. Keynote presentations and workshops with internal and external experts on the topics of sector coupling and the energy transition attracted large audiences. The intensive training in which employees learn how to coordinate ideas workshops in their teams was also highly popular. The purposes of these activities is to prepare "Take-Off", our internal innovation process that is due to start again in autumn 2022.

Innovation competition at Juwi
In 2021, Juwi launched an internal innovation competition to promote new ideas for Juwi and the energy transition. Well over 100 employees took part in the Power:ON initiative and submitted 45 projects. The winner was selected in February 2022, with first place being jointly awarded to two teams. One of the two winning teams looked into a geoplanning tool and developed this further. The second group of winners devised a concept for combining various renewable generation forms with storage and hydrogen technologies.

Group Business Performance

» Slight growth in adjusted sales
» Group earnings influenced by disposal gains from sale of shareholdings
» Equity ratio and net financial debt remain stable with high liquidity
» Ongoing high volume of investments

MAJOR DEVELOPMENTS AND OVERALL SUMMARY

Major developments in year under report

Geopolitical events and their consequences confront us with challenges
Since the onset of the war in Ukraine, the actions taken by politicians and businesses, and thus also our actions as an energy company, have been determined by the associated implications, as has everyday life within society as a whole. Since March 2022, the uncertainty surrounding gas, crude oil and coal supplies has led market prices for fuels and electricity to record highs. In response to sanctions imposed by the West and EU states, Russia reduced the supply of natural gas. Alongside climate protection, diversification of energy imports has therefore become massively more important for Germany. The Federal Government initiated numerous measures in the shortest of timeframes. These developments also have implications for our business, whether due to increased volatility on the energy trading markets, changes in energy and climate policy or regulatory interventions. We are countering the resultant adverse effects with targeted measures and cost savings.

Investments in sustainable growth
One firm component of our corporate strategy is our investment programme, which is broad based and has a long-term perspective. Between 2016 and 2026, we intend to invest a total of Euro 3 billion in sustainable growth. In the 2022 financial year, we invested Euro 335 million – our highest volume of investment in the past six years. We are making targeted investments in further expanding renewable energies, green heat, enhancing energy efficiency and developing innovative products and services. All our investments have one thing in common: They contribute to our target of being climate positive as a company from 2040 onwards.

In the 2022 financial year, we pressed ahead above all with expanding green heat in Mannheim. That is because we aim to convert our district heat supply for Mannheim and the region to 100 % green energy sources by 2030 at the latest. In the year under report, we began work on building a first river heat pump. With heat generation capacity of 20 MW_t, this will draw on environmental heat in the Rhine from the coming heat period. Moreover, in Mannheim we are also building plants to provide backup and peak load cover for our district heat supply. A phosphorous recycling plant where we intend to recover the phosphorous contained in sewage sludge for use in fertiliser production is being built at our Friesenheimer Insel location.

We also made further advances in expanding our own renewables-based generation portfolio: We took over several photovoltaics parks and one windfarm into our portfolio. At the end of the year under report, our electricity generation capacity from renewable energies stood at 614 MW, 50 MW higher than in the previous year. By 2026, this figure is set to exceed 800 MW.

One of our major projects began commercial operations at the end of January 2022: Our new energy from waste plant in the Scottish City of Dundee is now sustainably generating energy.

Project development business boosted
In promoting the expansion in renewable energies, one particular focus is on our project development business. Here, we merged our Windwärts subsidiary into Juwi in the 2022 financial year. With Juwi, we offer the whole spectrum of project development and services for planning, building and operations management for onshore wind turbines and ground-mounted photovoltaics systems, as well as for combined systems with battery storage facilities. We also took over Avantag in the year under report and boosted our project development business for photovoltaics in the B2B sector.

Growth in sales and adjusted EBIT
Adjusted sales increased to Euro 4.2 billion in the 2022 financial year (previous year: Euro 4.1 billion). Our sales performance was mainly influenced by higher wholesale prices for electricity and gas, higher electricity volumes and price-related factors in connection with providing CO_2 emission rights to a company recognised at equity.

At Euro 353 million, adjusted EBIT was significantly higher than in the previous year (Euro 278 million). Our earnings performance in the 2022 financial year was significantly influenced by disposal gains of Euro 55 million generated from the sale of fully consolidated companies and of companies recognised at equity. Excluding these one-off items, which were not accounted for in the first forecast for the 2022 financial year, adjusted EBIT amounted to Euro 298 million and was thus 8 % above the adjusted EBIT excluding disposal gains for the previous year (Euro 275 million). We generated higher earnings in the year under report by exploiting price volatilities in our energy trading business. Earnings also benefited from the development in wholesale electricity prices and addition of new capacities to our wind portfolio. Earnings were adversely affected, by contrast, above all by the reduction in earnings in our project development business, downstream effects of lower plant availability at a company recognised at equity, milder weather conditions than in the previous year and increased costs for operating resources.

Pre-tax earnings (adjusted EBT) increased year-on-year by Euro 87 million to Euro 322 million. This key figure was also influenced above all by disposal gains. Adjusted annual net income after minority interests improved by Euro 26 million and amounted to Euro 176 million in the year under report. Adjusted earnings per share amounted to Euro 2.67 (previous year: Euro 2.28).

Overall summary of business performance and economic position

The environment in which we operated in the 2022 financial year was very challenging both for the energy industry and in terms of energy policy. The energy and procurement markets showed increased volatility with rapid movements in prices. Despite these conditions, we can look back on a robust year.

We had expected to generate significant sales growth compared with the previous year. At Euro 4.2 billion, however, sales were only 2 % up on the previous year. Adjusted EBIT excluding disposal gains from the sale of shareholdings rose to Euro 298 million, up by 8 % on the comparable figure for the previous year (Euro 275 million). Earnings were thus consistent with our forecast, in which we had assumed that, from an operating perspective, adjusted EBIT would show a moderate increase.

Our operating performance in the 2022 financial year shows that our strategy, with its focus on climate protection, and our broad-based business portfolio offer a stable foundation for MVV’s successful further development.

COMPARISON OF EXPECTED AND ACTUAL BUSINESS PERFORMANCE AND OUTLOOK

Comparison of expected and actual business performance and outlook

	Forecast FY 2022	Results FY 2022	Outlook FY 2023
Adjusted EBIT	Moderately higher than previous year's level (Euro 278 million); forecast supplemented after end of first quarter and second quarter of 2022 financial year: Earnings set to additionally benefit from positive earnings contributions due to changes in our portfolio of shareholdings; including these items, adjusted EBIT will significantly exceed previous year's level	Adjusted EBIT of Euro 353 million (+ 27 %) Adjusted EBIT excluding disposal gains of Euro 298 million (+ 8 %)	At least at previous year's level (excluding disposal gains); subject to uncertainties influenced above all by the consequences of the war in Ukraine; in general dependent on weather and wind conditions, electricity and fuel prices and the availability of our plants. High volatility in renewable energies project development business
Adjusted equity ratio	Target > 30 %	Adjusted equity ratio of 27.1 % (34.3 % excluding security deposits for counterparty default risk (margins))	Target > 30 %
Adjusted ROCE	Excluding security deposits for counterparty default risk (margins) at around previous year's level (8.9 %)	Adjusted ROCE of 10.7 % excluding security deposits for counterparty default risk (margins) and of 9.0 % excluding disposal gains	At around previous year's level (excluding security deposits for counterparty default risk (margins) and excluding disposal gains)
Investments	Significant increase on previous year (Euro 306 million)	Total investments of Euro 335 million	At around previous year's level
Employees	Increase in personnel totals in growth fields; further efficiency measures in existing business	Increase in personnel totals to 6,556 employees at 30 September 2022 (previous year: 6,470)	Increase in personnel totals in growth fields; further efficiency measures in existing business

BUSINESS FRAMEWORK

Energy policy developments

Financial year shaped by numerous far-reaching developments
Energy policy produced fundamental changes in the energy industry landscape, and that in the shortest of timespans, in the 2022 financial year. In particular, the Federal Government's ambitious plans for the energy transition and geopolitical developments in Europe led to the introduction of numerous legislative proposals at an unprecedented pace on both German and European levels. Rapid action was required, although this speed came at the expense of statutory participation procedures. We accompanied these proposals very closely, both via major industry associations and in direct contact with decision-making bodies.

War in Ukraine impacts on energy policy actions
The war in Ukraine and its implications have significantly determined the energy policy and energy industry agenda since February 2022. The uncertainty surrounding supplies of gas, crude oil and coal from Russia led market prices for fuels and electricity to surge to record levels since March 2022. In response to sanctions imposed by the West and EU member states, Russia reduced the volume of natural gas supplied via those pipelines in operation. This led the Federal Government to activate the early warning level of the Gas Emergency Plan at the end of March 2022. In June 2022, it subsequently activated the alert level after Russia cut the volume of gas supplied via the Nord Stream 1 pipeline to 40 % of its usual level.

In its daily status reports, the Federal Network Agency (BNetzA) has repeatedly stated that Germany's gas supply is currently stable and that supply reliability is still ensured. In fact, there are no grid shortages in Germany or MVV's grids. None of the potential capacity restrictions on the level of upstream gas grid operators are currently in place, meaning that no grid-related measures have to be implemented by distribution grid operators in Germany or, by analogy, in MVV's grids. No grid-related measures are currently in force along the grid operator cascade between transmission and distribution grid operators or on the sovereign level. These would require the final warning level, the emergency level, to be activated. In this level, the Federal Network Agency would act as the federal load allocator and issue general and/or individual authorisations to end consumers or grid operators.

In parallel, the Federal Government has created a framework for upholding a high level of supply security even in the event of a gas shortage by amending the German Energy Security Act (EnSiG). This amendment took effect at the beginning of July 2022. The "gas allocation" originally provided for in the EnSiG legislation, which would have enabled natural gas importers to pass on the sharp rise in procurement prices to gas consumers, was halted by lawmakers at the end of September. It is to be replaced by direct assistance for importers including the option of nationalisation. At the same time, on 30 September 2022 the Federal Parliament approved a temporary reduction in the value added tax on natural gas and district heat from 19 % to 7 %. A "protective shield" of up to Euro 200 billion, which is due to last until 2024 and includes a price cap on electricity, gas and heat, is intended to further ease the burden on consumers.

The volume of gas used to generate electricity is also to be reduced. To achieve this, the Federal Government has introduced new requirements in the German Energy Industry Act (EnWG). These also allow power plants that are not powered by natural gas and that have already been decommissioned or are part of the grid reserve to participate in the electricity market on a temporary basis in the event of a gas shortage. In July 2022, the Federal Cabinet drew on these legal possibilities in two ordinances. The greater deployment of oil-fired and coal-fired power plants will temporarily increase CO_2 emissions, but this should not lead to any changes in statutory climate targets.

Together with the other EU member states, the Federal Government aims to avoid any supply shortages in the 2022/23 heating period by extending and diversifying natural gas procurement, taking measures to reduce demand and ensuring that natural gas storage facilities remain adequately filled. The EU Commission and member states have agreed that member states should reduce their natural gas consumption by 15 %. On 30 September 2022 the energy ministers of EU states further agreed that member states have to introduce a temporary electricity revenue cap, the details of which they may determine themselves. This is intended to siphon off any unexpectedly high profits from electricity generation.

The German Gas Storage Facility Act dating from the end of April 2022 was further amended by Ministerial Order at the end of July 2022. It requires Germany's natural gas storage facilities to be 75 % filled by the start of September, 85 % by 1 October and 95 % by 1 November. Following the further reduction in the volume of Russian gas supplied by the Nord Stream 1 pipeline to 20 % from the end of July 2022, discontinuation of supplies from 31 August 2022 and severe damage to the Nord Stream 1 and 2 pipelines at the end of September 2022, it is unclear whether the targets stipulated by the German Gas Storage Facility Act for November 2022 can be met. As of 6 November 2022, stock levels stood at 99.5 %.

Due the sharp rise in wholesale market prices, MVV will also be unable to avoid raising its prices.

Energy transition accelerated with Easter and Summer Packages
In its Coalition Agreement dated November 2021, the Federal Government set out ambitious targets for the energy transition and climate action. The focal point involves expanding electricity generation from regenerative sources to at least 80 % and increasing climate-neutral heat generation to at least 50 % by 2030. This course has gained new urgency due to the war in Ukraine. Alongside diversified procurement and an accelerated market launch for hydrogen, the expansion in renewable energies is intended as the third pillar to secure the energy supply in Germany.

In its Current Climate Action Status, in January 2022 the Federal Ministry for Economic Affairs and Climate Action announced that it would be presenting two extensive legislative packages in the current year. These would lay foundations for Germany to achieve climate neutrality by 2045. Adopted in July 2022, the first package ("Easter Package") stipulates that building and operating renewable energy generation plants is "in the overriding public interest" and serves to ensure "public security". It contains amendments to numerous energy laws and focuses above all on expanding renewable electricity generation. The tender volumes for the generation of electricity from renewable sources were raised sharply and the allocation under the German Renewable Energies Act (EEG) abolished. Lawmakers also created better framework conditions for photovoltaics systems and wind turbines.

Several minor amendments to the EEG legislation supplemented these measures in the course of the summer, such as those intended to make more space available for renewable energies and to simplify and accelerate planning and approval processes for renewable energies plants.

The acceleration in the renewable energies expansion and greater priority attached to this process are developments that MVV has long called for. Particularly positive is the introduction of improved subsidy conditions ("south quota") for wind turbines at less windy locations and specifically for projects south of the River Main. In the past, we urgently pointed out the need for such measures. The legislative packages support our strategy, which builds on expanding wind and solar power, as well as on green heat. However, the Federal Government will have to introduce more far-reaching measures, particularly in the heat sector, if it is to reach the targets it has set itself.

Subsidy system offers preferential treatment for refurbishment and expanding heat grids
Alongside transport, buildings are the only sector which failed to meet the savings targets set by the Federal Government in 2021. One reaction to this was a further restructuring of the subsidy system for energy-efficient buildings as of 15 August 2022: The Federal Ministry for Economic Affairs has consistently focused the Federal Funding for Efficient Buildings (BEG) on the refurbishment of existing buildings and is supporting both energy efficiency refurbishment measures and the replacement of gas and oil heating systems with efficient and climate-friendly technologies. Furthermore, at the beginning of August 2022 the European Commission provided its approval for the long-awaited Federal Funding for Efficient Heat Networks (BEW). This will become the most important instrument for us as well when it comes to expanding green heat. The funding policy took effect in mid-September 2022.

It is foreseeable that the amendment to the German Building Energy Act (GEG), due to take effect from the beginning of 2023, will maintain the direction already set. This is expected to include projects such as that, from 2024, new heating systems should be at least 65 % powered by renewable energies. In the implementation concept known of to date, district heat is set to assume a central role in meeting the requirements of the legislation, particularly in large built-up areas. It should also form a key component of the municipal heat plans that, based on a concept of the Federal Government, all municipalities of 10,000 inhabitants upwards should be required to develop and implement in the coming years. Corresponding federal legislation has been announced for spring 2023. We see this as providing tailwind both for our Mannheim Model and for district heat at all our locations. Further information about this can be found in the chapter Corporate Strategy.

EU Commission presents second part of "Fit for 55" Package

In December 2021, the EU Commission presented the second part of "Fit for 55", its package of measures aimed at implementing the Green Deal. This includes proposals for a European legal framework intended to support the ramp-up in renewable and decarbonised gases. Furthermore, the Commission aims to avoid methane emissions and reduce energy requirements in buildings. To this end, it has also proposed the gradual introduction of minimum energy standards for existing buildings. These proposals are now passing through the customary EU process: The European Parliament has addressed the proposal submitted by the Commission and found common positions on the main legislative items (including the Renewable Energy Directive, Energy Efficiency Directive, Emissions Trading Directive). These are expected to be discussed in the trialogue process between the Parliament, Commission and Council during 2023 and then adopted, enabling the legislation to take effect in 2024.

In response to the war in Ukraine, in May 2022 the EU Commission also introduced the "REPowerEU" strategy. In this framework, an additional total of up to Euro 300 billion is to be channelled into energy infrastructure and converting to energy energies. The aim is to end Europe's dependence on Russian fuels and accelerate the energy transition. The interventions announced in the electricity market design on EU level are intended to serve the same purpose.

Equity returns stipulated for fourth regulatory period

In October 2021, the Federal Network Agency (BNetzA) published the stipulations for future rates of equity return for electricity and gas grid operators. In these, the BNetzA set a uniform equity return for electricity and gas grid operators, and thus also for our grid companies. These amount to a return of 5.07 % before corporate income tax for new systems (previously 6.91 %). For existing systems, a return of 3.51 % before corporate income tax was stipulated (previously 5.12 %). The new rates of return apply from the fourth regulatory period, which begins in the 2023 calendar year for gas grid operators and in the 2024 calendar year for electricity grid operators. From the perspective of grid operators, this level of return threatens the performance and investment capacity of grid operators, and thus the success of the energy transition. In particular, the market risk premium proposed by the BNetzA is very low compared with other European countries.

Higher Regional Court in Düsseldorf annuls general sectoral productivity factor for electricity grid operators

In a ruling dated March 2022, the Higher Regional Court in Düsseldorf annulled a resolution adopted by the Federal Network Agency (BNetzA) in November 2018 which stipulated the general sectoral productivity factor for electricity grid operators (Xgen electricity) for the 3rd regulatory period. It also obliged the authority to adopt a new resolution that takes due account of the court's legal opinion.

The general sectoral productivity factor (Xgen) is important in determining the level of grid fees, and thus also earnings at grid operators. The Xgen reduces the permissible revenue cap. Its calculation is based on the assumed level of progress in grid productivity compared with the overall economy. This factor is countered by inflation.

We welcome the ruling, not least due to concerns about the methodology used in the calculation and the significantly lower corresponding stipulation for the gas sector.

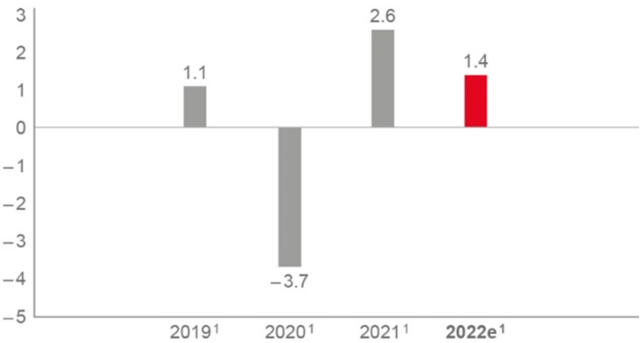
BSI withdraws market declaration

In May 2022, the Federal Office for Information Security (BSI) withdrew its General Ruling on the Rollout of Smart Meter Systems (iMSys) dated February 2020 due to questions as to its lawfulness. To secure the rollout to date, the BSI issued a General Ruling for Assessments pursuant to § 19 (6) of the German Metering Point Operation Act (MsbG), on which basis metering point operators (MSBs) may continue to install and operate smart meters (iMSys). The rollout of such systems has nevertheless suffered a setback, which we regret. The withdrawal of the General Ruling means that the metering point operators responsible for the respective sites are no longer subject to any rollout obligation. The start date, and thus expiry, of the deadline for a minimum rollout quota of 10 % also no longer apply. A new deadline would only begin upon the issuing of a new market declaration. Further implications are not yet fully foreseeable.

Market climate and competition

German economy in reverse gear
In their Joint Economic Forecast dated autumn 2022, Germany's leading economic research institutes reduced their growth expectations for the country's economy in the 2022 calendar year. Having forecast GDP growth of 2.7 % in the spring, the experts now expect gross domestic product to rise by 1.4 %. The German economy is increasingly being held back by the energy price crisis.

GDP DEVELOPMENT IN GERMANY
(%)



1 Calendar year

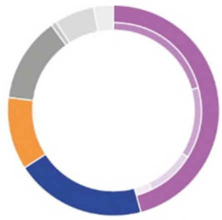
Source: Forecast in autumn survey of leading German economic research institutes (September 2022)

Increase in electricity generation in Germany
Based on current calculations compiled by the Association of the German Energy and Water Industries (BDEW), gross electricity generation volumes totalled 434 billion kWh in Germany in the first nine months of 2022. They were thus around 1 % higher than the previous year's figure (428 billion kWh).

Renewables share of German electricity generation rises to 46 %
According to BDEW estimates, the renewable share of gross electricity generation in Germany totalled 46 % in the first nine months of the 2022 calendar year, up from 42 % in the previous year's period. Part of this relative increase is also due to lower electricity consumption in Germany, which fell by around 1 % compared with 2021 to 393 billion kWh in the first three quarters of 2022. Wind-based generation played a key role in the increase in the renewables share. Electricity generation volumes from onshore wind turbines were 18 % higher than in the previous year. Offshore wind turbines reported a 5 % increase. Photovoltaics systems also produced around 20 % more electricity. Biomass and biogenic municipal waste generated around 3 % more electricity than one year earlier. Overall, around 198 billion kWh of electricity was generated from renewable energies.

GROSS ELECTRICITY GENERATION IN GERMANY
Shares (%)

	2022[1]
Electricity from renewable energies	46
Wind power	21
Photovoltaics	13
Biomass, including biogenic municipal waste	9
Water	3
Lignite	20
Hard coal	11
Natural gas	13
Petroleum products	1
Nuclear energy	6
Other	3



1 January to September 2022

Source: BDEW Monthly Statistics, Destatis, EEX, VGB, ZSW (October 2022)

Wind power expansion remains at low level
In January 2022, the German Wind Energy Association (BWE) published its "Wind Energy Fact Sheet Germany" for the 2021 calendar year. Overall, gross onshore wind power capacity totalling 1,925 MW was newly installed in Germany. The gross volume of new capacity added remains low, but is slowly recovering from the downturn in new capacity in 2019 and 35 % higher than the equivalent figure for the previous year. Total installed onshore and offshore wind power capacity stood at 63,924 MW and was around 2 % higher than the previous year's figure.

Gross onshore wind power capacity totalling 977 MW was added in Germany in the 1st half of the 2022 calendar year. This was around 1 % more than in the first six months of the previous year. Cumulative installed onshore capacity amounts to 56,848 MW.

Current studies confirm our strategic alignment
In 2021, the EU resolved to become climate neutral, i.e. not to cause any net emissions, by 2050. A 55 % reduction in emissions is to be achieved by 2030 already. Germany's Federal Government raised its emissions reduction target for 2030 to 65 % and has committed the country to becoming climate neutral by 2045. By 2030, 80 % of electricity generation in Germany is to be based on renewable energies, while electricity demand is also expected to increase. Current studies show that these targets are achievable and compatible with energy security. To meet the targets, however, it will be necessary to act quickly, lay the right foundations and significantly speed up the pace of implementation across all state bodies directly or indirectly involved in decision-making processes.

From our perspective, five major studies analysing Germany's transformation to climate neutrality were published in 2021. These were the dena pilot study "Road to Climate Neutrality", "Climate Pathways 2.0" published by the Federation of German Industries (BDI), "Towards a Climate-Neutral Germany 2045" published by the Climate Neutrality Foundation, Agora Energiewende and Agora Verkehrswende, "Germany on the Way to Climate Neutrality 2045" published by the Ariadne Kopernikus Project and the "Long-Term Scenarios" commissioned by the Federal Ministry for Economic Affairs and Climate Action (BMWK). Together, these five institutions performed a structured "Comparison of the Big 5 Climate Neutrality Scenarios" in 2022. This shows that the central pillars of a climate-neutral energy system as presented in the studies are consistent: a significant rise in energy efficiency, the electrification of end consumption, the expansion in renewable energies and the use of hydrogen and hydrogen-derived products. Technical and natural CO_2 sinks also play a role in all the studies.

"EnergySystem 2050", a study published by Transnet BW GmbH in June 2022, investigates how European climate neutrality can be achieved in 2050 and, by reference to a detailed model, compares two cost-optimal pathways. The authors conclude that the energy transition can only be implemented efficiently if it is jointly planned and executed on European level. Moreover, electricity and gas infrastructure are to be viewed as the backbone of the energy transition. In future, it will therefore be necessary to ensure temporal flexibility for electricity by working with storage facilities and demand management in all connected sectors.

The "Scenario Framework for the 2037 Electricity Grid Development Plan" compiled by Germany's transmission grid operators for the first time presents the complete transformation in the energy sector in 2045. A significant rise in electricity consumption is assumed in all scenarios. The main drivers of this demand growth particularly include e-mobility, heat pumps, hydrogen electrolysis and the decarbonisation of industry.

In "Combining Energy Security and Climate Protection – Measures for the Way Out of the Fossil Energy Crisis", a paper published in March 2022, Agora Energiewende illuminates the target of climate neutrality in conjunction with Europe's energy policy sovereignty in light of its structural dependence on Russian energy supplies. The investigation concludes that Germany can end its dependence on Russian gas imports and cut its gas needs by one fifth by 2027 while simultaneously making achievable progress in terms of climate protection. The existing instruments proposed for climate protection boost energy security; however, the new urgency requires political decisions to be taken quickly. Should Russian imports be discontinued in full, then Germany's gas demand could be temporarily reduced by up to 260 TWh. This is only possible if all players in society pull together and make great efforts. Targeted financial support is needed for low-income households, as is a protective shield for Germany's industry.

For the electricity sector, reducing Germany's dependence on gas will require a significantly accelerated introduction of renewable energies, hydrogen and storage facilities. This is shown in "Climate-Neutral Germany 2035" a study compiled in June 2022 against the backdrop of the war in Ukraine (Agora Energiewende). The study nevertheless also underlines clear that investments in energy efficiency and digitalisation are crucial levers for Germany to emerge from the energy crisis.

Our strategic alignment focuses on sustainability and supply reliability. We will benefit from the implementation of climate targets in the long term: in our energy generation from renewable energies, our project development and operations management for renewable energies plants and our marketing of the energy produced, our decentralised energy and heat supply and our energy efficiency solutions and services.

Sharp rise in wholesale prices for fuels and electricity

Wholesale prices (average) from 1 October to 30 September

	FY 2022	FY 2021	+/– change	% change
Crude oil [1] (US$/barrel)	96.63	62.20	+ 34.43	+ 55
Natural gas [2] (Euro/MWh)	93.58	21.56	+ 72.02	+ 334
Coal [3] (US$/tonne)	189.44	79.52	+ 109.92	+ 138
CO_2 rights [4] (Euro/tonne)	80.80	43.52	+ 37.28	+ 86
Electricity [5] (Euro/MWh)	234.72	61.62	+ 173.10	+ 281

1 Brent crude oil; front-month
2 Market region Trading Hub Germany/Net Connect Germany; front-year
3 Front-year
4 Front December contract
5 Front-year

The 2022 financial year was shaped by developments on the energy market that must be termed historical and extremely severe. Energy markets were shaped by an increasingly serious energy crisis, the main cause of which is the war in Ukraine and the resultant trade sanctions. Further issues, such as unusually low availability levels at French nuclear power plants and an extremely dry and very warm summer, also contributed to a persistently tense market situation. Prices repeatedly reached and exceeded new record highs, particularly in the electricity and gas markets. It was only towards the end of the financial year that markets witnessed an initial fall in prices compared with the highs reached at the end of August.

Having already witnessed a strong upward trend in the 2021 financial year, oil market prices showed a further marked increase in the year under report, rising by an average of + 55 %. Prices for Brent crude oil for supply in the following month peaked at more than US$ 130/bbl in March 2022, their highest level since the financial crisis in 2008.

The coal market also saw a sharp upward trend in the past year, reporting an average year-on-year price increase of + 138 % in the period under report. After comparatively moderate price movements in the first months of the financial year, with the onset of war in Ukraine at the end of February 2022 front-year prices for hard coal in the ARA region (Amsterdam, Rotterdam, Antwerp) surged upwards and reached a preliminary high at the end of August and beginning of September (front-year contract). Prices were well above the levels seen in recent decades.

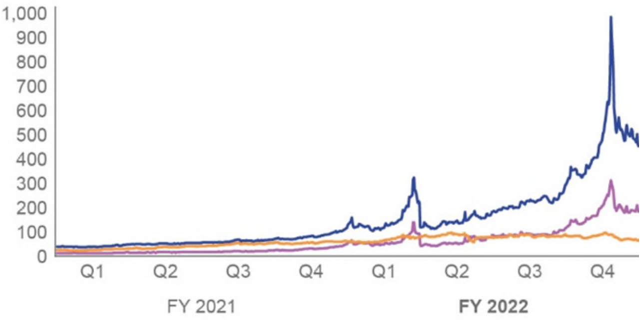
Within the energy sector, it was the gas market that showed the sharpest relative rise in prices in the past financial year. At the start of the year, the German gas market regions NetConnect Germany and Gaspool were merged to form the Trading Hub Europe (THE) market region. Comparison of THE prices traded in the period under report for the 2023 calendar year with the corresponding prices in the NCG market region in the previous year reveals an increase by a factor of more than four. The price rise between the start and end of the financial year (forward market product for the 2023 financial year in each case) is even higher at a factor of around six.

The market for CO_2 emission rights (EUA) also showed an increase, with prices almost doubling in the period under report (+ 86 %). Having risen sharply since the peak of the coronavirus crisis, the emission rights price was already listed at just over Euro 60/tonne at the start of the financial year. In the period under report, it rose further on several occasions and peaked just below the Euro 100/tonne mark.

Prices for base load electricity for supply in the following year averaged Euro 235/MWh in the year under report and thus rose by 281 % compared with the previous year's figure. Alongside the gas market as the main driver, European electricity markets were also affected by extreme aridity in spring and summer 2022 and very low availability levels at French nuclear power plants. Compared with previous years, there were changes, some notable, in the volumes of electricity imported and exported between European countries.

The margins achieved from generating electricity from coal and gas – the clean dark spread (CDS) and clean spark spread (CSS) – showed highly disparate developments in the past financial year. With great volatility within the financial year, the CDS rose sharply while the CSS showed a negative development on average.

DEVELOPMENT IN WHOLESALE MARKET PRICES FOR ELECTRICITY, GAS AND CO_2 RIGHTS

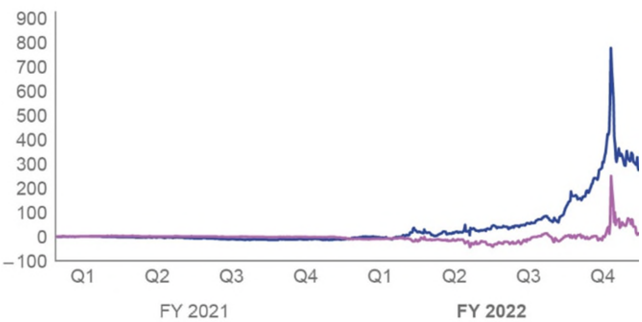


- EEX electricity base front-year (Euro/MWh)
- EEX natural gas Trading Hub Germany/ Net Connect Germany front-year (Euro/MWh)
- EUA front-year (Euro/tonne CO_2)

DEVELOPMENT IN WHOLESALE PRICES FOR OIL AND COAL

- Brent crude oil front-month (US$/barrel)
- API2 coal front-year (US$/metric tonne)

DEVELOPMENT IN CLEAN DARK SPREAD AND CLEAN SPARK SPREAD 2023



- Clean dark spread 2023 (Euro/MWh)
- Clean spark spread 2023 (Euro/MWh)

MVV consolidates its strong market positions

- Based on analysis performed by the consultancy ecoprog, we are one of Germany's largest operators of energy from waste and biomass plants. At our locations in Germany, we accepted a total of 1.6 million tonnes of non-recyclable waste and refuse-derived fuels for incineration in the 2022 financial year.

- According to the Market Master Data Register at the Federal Network Agency (BNetzA), with our Juwi subsidiary we are one of Germany's leading renewable energies project developers.

- Directly marketing electricity from renewable energies in the market premium model also forms part of our portfolio. At the end of the year under report, we had around 3,800 MW under contract in Germany. According to Energie & Management, the energy market journal, this makes us one of Germany's largest direct marketers.

- Our grid companies in Germany have district heat grids with a total length of around 1,200 kilometres. In the year under report, we generated district heat turnover of 6.0 billion kWh in Germany. According to statistics compiled by the AGFW industry association, including industrial steam this makes us the second-largest district heat provider in Germany.

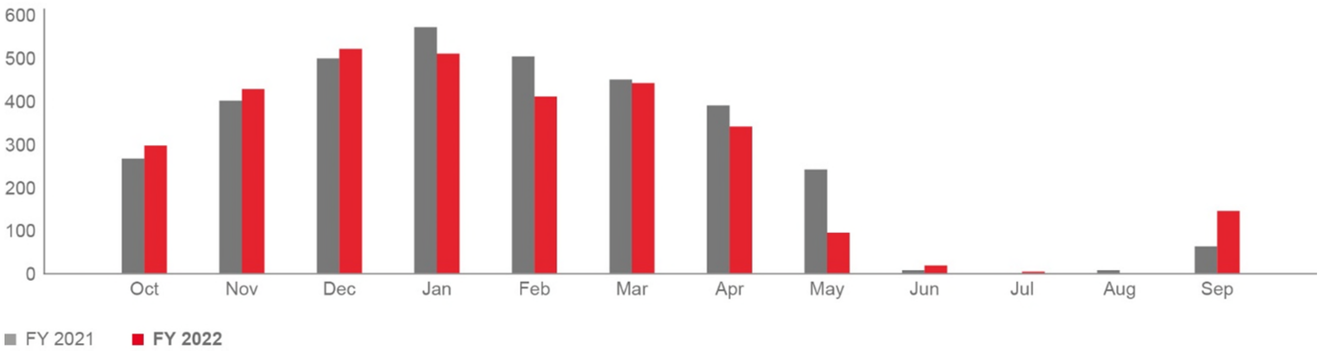
Impact of weather conditions

Milder weather leads to lower degree day figures
Higher outdoor temperatures lead to lower heat requirements at our customers. That is also reflected in lower degree day figures, which are used as an indicator of temperature-based heat consumption. It was milder in the year under report than in the previous year. Degree day figures were around 6 % lower than the figures for the previous year.

Wind volumes at previous year's level
By analogy with our customers' heat requirements, electricity generation volumes at our renewable energies plants are also influenced by weather conditions. Wind volumes, on which the amount of electricity generated by our wind turbines significantly depends, are particularly significant in this respect.

In the regions relevant to us, the volume of usable wind power in the 2022 financial year was around 4 % lower overall than the long-term average. Wind volumes were thus at the previous year's level. For this comparison, we draw on the "EMD-ERA" wind index with a reference period (historic average).

DEGREE DAY FIGURES



PRESENTATION OF EARNINGS PERFORMANCE

The period under report is the 2022 financial year, which started on 1 October 2021 and ended on 30 September 2022. Unless otherwise indicated, the comments below refer to the MVV Group ("MVV"), i.e. all companies fully consolidated and the updated measurement of those shareholdings that are recognised at equity. Figures have been rounded up or down to the nearest million-euro amounts. Discrepancies may therefore arise between the aggregate sums of individual items and the totals stated.

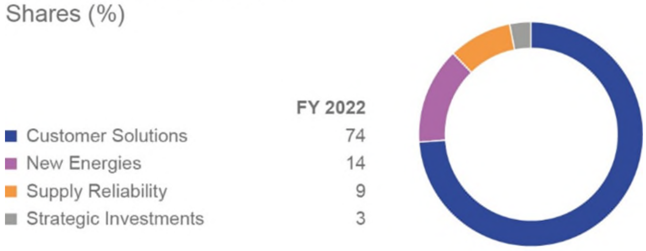
MVV from 1 October to 30 September

Euro million	FY 2022	FY 2021	+/– change	% change
Development in turnover				
Electricity (kWh million)	27,115	24,380	+ 2,735	+ 11
Heat (kWh million)	6,708	6,940	– 232	– 3
Gas (kWh million)	19,259	27,094	– 7,835	– 29
Water (m^3 million)	40.2	40.3	– 0.1	0
Adjusted sales excluding energy taxes	4,199	4,131	+ 68	+ 2
of which electricity revenues	1,534	1,989	– 455	– 23
of which heat revenues	438	391	+ 47	+ 12
of which gas revenues	1,215	776	+ 439	+ 57
of which water revenues	91	90	+ 1	+ 1
Adjusted EBIT	353	278	+ 75	+ 27
Adjusted EBIT excluding disposal gains	298	275	+ 23	+ 8

In sales, we eliminate the difference between the hedge and reporting date prices as of the respective realisation date pursuant to IFRS 9. This resulted in net totals of Euro 1,724 million at 30 September 2022 and Euro 102 million at 30 September 2021. The development in adjusted sales in the year under report was influenced above all by the rise in wholesale prices for electricity and gas, higher electricity volumes and price-related factors in connection with the provision of CO_2 emission rights to a company recognised at equity. Overall, adjusted sales grew year-on-year by 2 % to Euro 4.2 billion. In our forecast, we still expected to achieve significant sales growth. MVV generated 93 % of its consolidated sales in Germany in the 2022 financial year (previous year: 92 %), while 7 % of sales were generated abroad (previous year: 8 %).

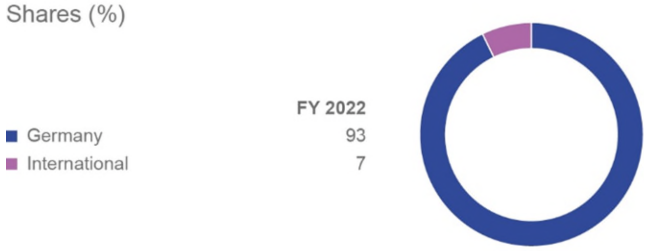
ADJUSTED SALES EXCLUDING ENERGY TAXES BY REPORTING SEGMENT

Shares (%)



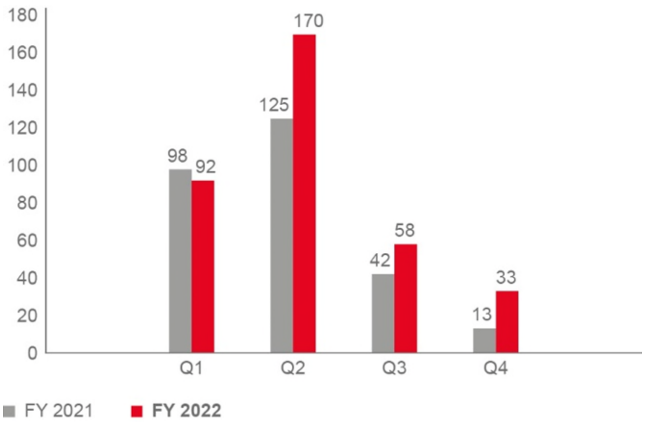
ADJUSTED SALES EXCLUDING ENERGY TAXES BY REGION

Shares (%)



At Euro 353 million, adjusted EBIT was 27 % higher than in the previous year. The earnings performance in the 2022 financial year was mainly shaped by disposal gains of Euro 55 million from the sale of fully consolidated companies and companies recognised at equity (previous year: Euro 3 million). Excluding these one-off items, i.e. on a basis comparable with the previous year, adjusted EBIT grew by 8 % from Euro 275 million in the previous year to Euro 298 million in the year under report. This figure is consistent with our forecast, in which we assumed that, from an operating perspective, adjusted EBIT would show a moderate increase. We achieved higher earnings in the year under report by exploiting price volatilities in our energy trading. Moreover, adjusted EBIT benefited from the development in wholesale electricity prices and the addition of new capacities to our wind portfolio. By contrast, our earnings were adversely affected above all by lower earnings in our project development business, the downstream impact of lower plant availability levels at an at-equity company, milder weather conditions compared with the previous year and increased costs for operating resources.

ADJUSTED EBIT BY QUARTER
Euro million



Customer Solutions reporting segment

Customer Solutions from 1 October to 30 September

Euro million	**FY 2022**	FY 2021	+/– change	% change
Development in turnover				
Electricity (kWh million)	26,546	23,832	+ 2,714	+ 11
Heat (kWh million)	4,664	4,948	– 284	– 6
Gas (kWh million)	18,841	26,714	– 7,873	– 29
Water (m³ million)	39.3	39.3	0,0	0
Usable residual waste delivered (tonnes 000s)	145	156	– 11	– 7
Adjusted sales excluding energy taxes	3,106	3,101	+ 5	0
Adjusted EBIT	136	47	+ 89	>+ 100

The rise in electricity volumes chiefly resulted from higher trading volumes. Heat turnover fell short of the previous year's figure, with this principally being due to mild weather conditions. Lower trading volumes were the main reason for the lower level of gas turnover.

Adjusted sales were at the previous year's level.

Adjusted EBIT in the Customer Solutions segment benefited in the year under report from disposal gains resulting from the sale of shareholdings. In addition, we generated higher earnings in the past financial year by exploiting price volatilities in our energy trading business.

New Energies reporting segment

New Energies from 1 October to 30 September

Euro million	**FY 2022**	FY 2021	+/– change	% change
Development in turnover				
Electricity (kWh million)	238	350	– 112	– 32
Heat (kWh million)	1,369	1,271	+ 98	+ 8
Gas (kWh million)	273	258	+ 15	+ 6
Usable residual waste delivered (tonnes 000s)	2,186	2,152	+ 34	+ 2
Adjusted sales excluding energy taxes	579	622	– 43	– 7
Adjusted EBIT	150	120	+ 30	+ 25

The reduction in electricity turnover and increase in heat volumes were mainly due to the fact that we generated more district heat at our energy from waste plant in Leuna. The rise in gas turnover resulted above all from the launch of operations at our bio-waste anaerobic digestion plant in Bernburg in the 2022 financial year.

The decrease in adjusted sales was attributable to our project development business.

Adjusted EBIT benefited in the year under report from the development in wholesale electricity prices. Moreover, earnings contributions from our wind turbines were ahead of the previous year’s figure due to the addition of new capacities to our wind portfolio. These factors more than offset the downturn in earnings in our project development business, that is generally characterised by a high level of volatility, as well as the adverse impact on earnings due to lower plant availability in our environmental energy business.

Supply Reliability reporting segment

Supply Reliability from 1 October to 30 September

Euro million	**FY 2022**	FY 2021	+/– change	% change
Adjusted sales excluding energy taxes	387	310	+ 77	+ 25
Adjusted EBIT	37	78	– 41	– 53

The growth in adjusted sales was attributable above all to price factors in connection with the provision of CO_2 emission rights to a company recognised at equity.

The reduction in adjusted EBIT chiefly resulted from the downstream impact of lower plant availability at a company recognised at equity in connection with the high level of energy market prices. These negative factors were partly offset by higher earnings contributions from our fully consolidated generation plants and our grid business.

Strategic Investments reporting segment

Strategic Investments from 1 October to 30 September

Euro million	**FY 2022**	FY 2021	+/– change	% change
Development in turnover				
Electricity (kWh million)	331	198	+ 133	+ 67
Heat (kWh million)	675	721	– 46	– 6
Gas (kWh million)	145	122	+ 23	+ 19
Water (m^3 million)	0.9	1.0	– 0.1	– 10
Usable residual waste delivered (tonnes 000s)	117	124	– 7	– 6
Adjusted sales excluding energy taxes	126	97	+ 29	+ 30
Adjusted EBIT	18	22	– 4	– 18

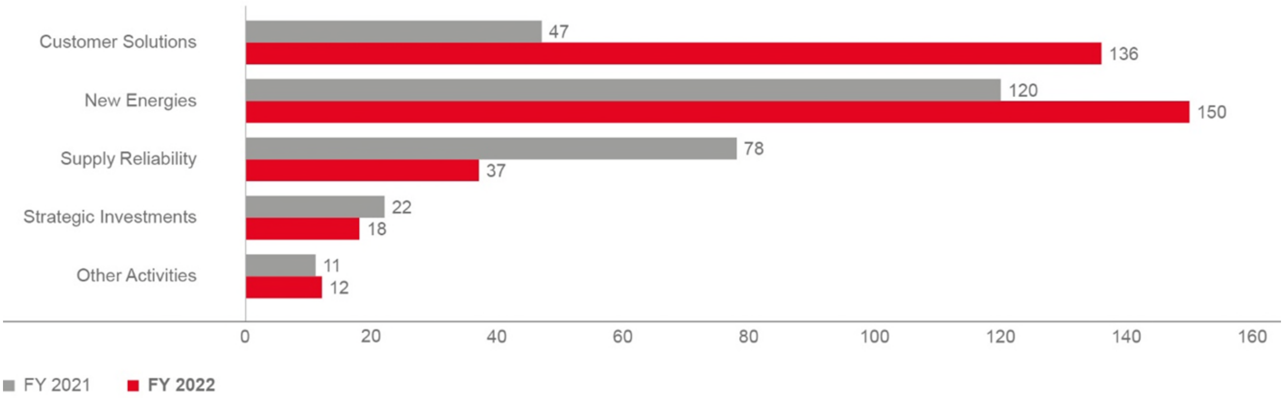
The increase in electricity turnover resulted among other factors from improved electricity marketing at our Czech subsidiary. The reduction in heat turnover was due above all to milder weather conditions, while the increase in gas turnover particularly resulted from the new customer business in Germany. The growth in adjusted sales reflects the development in electricity and gas turnover, while the decrease in adjusted EBIT was primarily attributable to higher gas procurement expenses at our Czech subsidiary.

Other Activities reporting segment

Other Activities from 1 October to 30 September				
Euro million	**FY 2022**	FY 2021	+/– change	% change
Adjusted sales excluding energy taxes	1	1	0	0
Adjusted EBIT	12	11	+ 1	+ 9

Adjusted EBIT was at around the same level as in the previous year.

ADJUSTED EBIT BY REPORTING SEGMENT
Euro million



Reconciliation with adjusted EBIT

In the following table, we show how we reconcile the EBIT reported in the income statement for the 2022 financial year with the adjusted EBIT relevant for management purposes.

Reconciliation of EBIT (income statement) with adjusted EBIT from 1 October to 30 September			
Euro million	**FY 2022**	FY 2021	+/– change
EBIT as reported in income statement	35	530	– 495
Financial derivative measurement items	315	– 256	+ 571
Structural adjustment for part-time early retirement	–	<1	–
Interest income from finance leases	3	4	– 1
Adjusted EBIT	**353**	**278**	**+ 75**

For our value-based management, we refer to adjusted EBIT and calculate this key operating earnings figure by chiefly adjusting our operating earnings before interest and taxes to eliminate the positive and negative items due to fair value measurement as of the reporting date of financial derivatives recognised pursuant to IFRS 9. These came to net totals of Euro – 315 million at 30 September 2022 and of Euro 256 million at 30 September 2021. These measurement items reflect the development in prices on the commodities and energy markets. They have no impact on payments, neither do they affect our operating business or dividend.

Development in key income statement items
In cost of materials, we eliminate the difference between the hedge and reporting date prices pursuant to IFRS 9. **Adjusted cost of materials** decreased by Euro 17 million to Euro 3,131 million and was thus approximately at the same level as in the previous year. The development in cost of materials chiefly reflects the rise in wholesale prices for gas and electricity, as well as higher electricity volumes. These factors were countered by volume effects for gas and lower cost of materials in our project development business.

Due above all to the growth in our workforce, **adjusted employee benefit expenses** rose by Euro 24 million to Euro 511 million.

Within other operating income, IFRS 9 measurement items amounted to Euro 4,635 million (previous year: Euro 1,224 million). Excluding these measurement items, the development in **adjusted other operating income** (further details under Notes to Income Statement, Note 4) was mainly influenced by measurement effects for cavern management. Overall, adjusted other operating income rose year-on-year by Euro 150 million to Euro 260 million.

In other operating expenses, IFRS 9 measurement items amounted to Euro 4,507 million (previous year: Euro 899 million). Excluding these measurement items, **adjusted other operating expenses** (Notes to Income Statement, Note 7) increased by Euro 179 million to Euro 384 million. This development was also mainly influenced by measurement effects relating to cavern management.

In the Income Statement, IFRS 9 measurement items are included in other operating income and other operating expenses. Their net balance resulted in a positive item of Euro 128 million in the 2022 financial year (previous year: Euro 325 million).

Income from companies recognised at equity rose by Euro 28 million to Euro 65 million, with this chiefly being driven by the sale of at-equity companies in the year under report. The previous year's figure was raised in particular by remeasurement of the shares in Fernwärme Rhein-Neckar given the subsequent full consolidation of this company.

Depreciation and amortisation (chapter Notes to Income Statement, Note 9) increased by Euro 7 million to Euro 211 million. This rise was attributable above all to investments and operations launches with property, plant and equipment in the period under report.

Largely as a result of currency translation items and measurement effects, the **adjusted financial result** improved by Euro 12 million and stood at Euro – 32 million.

Net of the adjusted financial result, **adjusted EBT** came to Euro 322 million and rose year-on-year by Euro 87 million (previous year: Euro 234 million). Adjusted taxes on income stood at Euro 73 million (previous year: Euro 58 million).

Adjusted annual net income rose by Euro 72 million and amounted to Euro 249 million for the year under report.

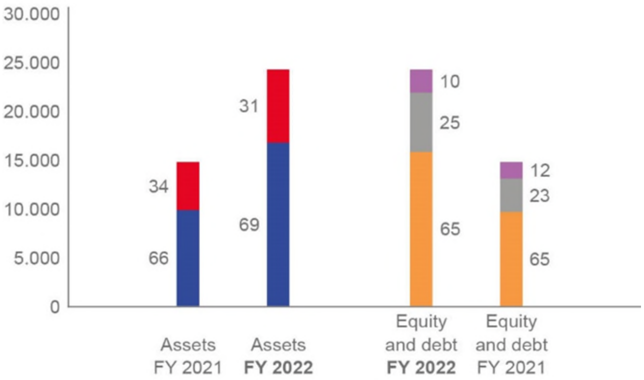
At Euro 72 million, **adjusted non-controlling interests** were Euro 46 million higher than in the previous year, a development chiefly due to improved earnings at Energieversorgung Offenbach and Stadtwerke Kiel. **Adjusted annual net income after minority interests** rose by Euro 26 million to Euro 176 million (previous year: Euro 150 million). On this basis, **adjusted earnings per share** amounted to Euro 2.67 (previous year: Euro 2.28). The number of shares was unchanged at 65.9 million.

PRESENTATION OF ASSET POSITION

Balance sheet structure

Euro 000s	**30 Sep 2022**	30 Sep 2021	% change
Assets			
Non-current assets	7,569,386	4,968,905	+ 52
Current assets	16,758,893	9,840,753	+ 70
Total assets	**24,328,279**	**14,809,658**	**+ 64**
Equity and debt			
Equity	2,446,071	1,758,624	+ 39
Non-current debt	5,998,445	3,373,131	+ 78
Current debt	15,883,763	9,677,903	+ 64
Total and equity debt	**24,328,279**	**14,809,658**	**+ 64**

BALANCE SHEET STRUCTURE
Euro million, shares (%)



Balance sheet development

Total assets amounted to Euro 24,328 million at the balance sheet date and were thus Euro 9,518 million higher than at 30 September 2021. Further details can be found in the Balance Sheet.

Non-current assets increased by Euro 2,600 million to Euro 7,569 million. Property, plant and equipment rose by Euro 67 million to Euro 2,955 million. This was chiefly due to the high volume of investments, which therefore exceeded depreciation and amortisation. The development in non-current other receivables and assets (chapter Notes to Balance Sheet, Note 22) particularly reflects the changed level of market prices and resultant rise in the positive fair values of energy trading transactions recognised under IFRS 9. This factor amounted to Euro 3,765 million at the balance sheet date (30 September 2021: Euro 1,240 million). Overall, non-current other receivables and assets rose by Euro 2,521 million to Euro 3,781 million.

Current assets grew by Euro 6,918 million to Euro 16,759 million. Above all, current other receivables and assets (chapter Notes to Balance Sheet, Note 22) rose by Euro 5,943 million to Euro 13,908 million, a development chiefly due to the higher level of market prices and resultant rise in the positive fair values of energy trading transactions recognised under IFRS 9. This factor amounted to Euro 13,662 million at the balance sheet date (30 September 2021: Euro 7,757 million). Inventories increased by Euro 141 million to Euro 352 million, with this being due in particular to higher stocks in our project development business, gas storage in a cavern and coal stocks. Primarily as a result of the higher level of prices on energy markets, trade receivables (chapter Notes to Balance Sheet, Note 24) grew by Euro 178 million to Euro 554 million. Cash and cash equivalents (chapter Notes to Balance Sheet, Note 26) rose to Euro 1,885 million, up by Euro 627 million compared with the previous year's balance sheet date. This increase was principally driven by high inflows of security deposits for counterparty default risk (margins), which amounted to Euro 895 million in the period under report (previous year: inflows of Euro 843 million), the disposal of companies and a high volume of net new borrowing.

Our equity including non-controlling interests amounted to Euro 2,446 million at the balance sheet date and was thus Euro 687 million higher than in the previous year (chapter Notes to Balance Sheet, Note 28).

Non-current debt increased to Euro 5,998 million, up by Euro 2,625 million compared with the previous year's balance sheet date. Within this item, non-current other liabilities (chapter Notes to Balance Sheet, Note 32) rose by Euro 2,304 million to Euro 3,590 million. This increase was primarily due to the changed level of market prices and resultant rise in the negative fair values of energy transactions recognised under IFRS 9. This item amounted to Euro 3,428 million at the balance sheet date (30 September 2021: Euro 1,125 million). The increase in deferred tax liabilities by Euro 253 million to Euro 527 million was due above all to the change in the positive fair values of derivatives recognised under IFRS 9.

Current debt grew by Euro 6,206 million and amounted to Euro 15,884 million in total. This development was notably influenced by current other liabilities (chapter Notes to Balance Sheet, Note 32), which rose by Euro 6,144 million to Euro 14,949 million. This increase was in turn chiefly due to the more marked changes in market prices and resultant rise in negative fair values of energy trading transactions recognised under IFRS 9. This item stood at Euro 13,178 million (30 September 2021: Euro 7,733 million). Moreover, the development in current liabilities was also influenced by high inflows of funds for security deposits for counterparty default risk (margins) in the period under report. As a result, liabilities for security deposits for counterparty default risk (margins) rose by Euro 632 million. The increase in trade payables (chapter Notes to Balance Sheet, Note 33) by Euro 124 million to Euro 507 million mainly reflects the higher level of wholesale prices on the energy markets.

For Group management purposes, we adjust our consolidated balance sheet at 30 September 2022 to eliminate cumulative IFRS 9 measurement items. On the asset side, we eliminate positive fair values of derivatives and allocable deferred taxes, which amounted to Euro 17,441 million (30 September 2021: Euro 8,994 million). On the equity and debt side, we eliminate negative fair values and allocable deferred taxes, which stood at Euro 16,858 million (30 September 2021: Euro 8,897 million). Within equity, we then eliminate the net balance of Euro 583 million (30 September 2021: Euro 97 million). This resulted in adjusted equity of Euro 1,863 million at 30 September 2022 (30 September 2021: Euro 1,662 million). As a percentage of adjusted total assets of Euro 6,888 million (30 September 2021: Euro 5,815 million), the adjusted equity ratio came to 27.1 % at 30 September 2022, compared with 28.6 % at 30 September 2021. This reduction is attributable above all to the substantial growth in total assets due to unusually high inflows of security deposits for counterparty default risk (margins). Excluding these margins, the adjusted equity ratio would amount to 34.3 % at 30 September 2022 (30 September 2021: 33.3 %).

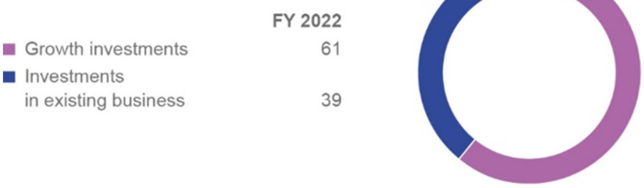
Investments

We invested a total of Euro 335 million in the 2022 financial year (previous year: Euro 306 million), and thus more than in any of the past six years.

Investments from 1 October to 30 September

Euro million	**FY 2022**	FY 2021	+/– change	% change
Customer Solutions	58	34	+ 24	+ 71
New Energies	109	124	– 15	– 12
Supply Reliability	135	125	+ 10	+ 8
Strategic Investments	11	8	+ 3	+ 38
Other Activities	22	15	+ 7	+ 47
Total	**335**	**306**	**+ 29**	**+ 9**

INVESTMENTS
Shares (%)



Our largest investment projects involved:

- Taking over 100 % of the shares in Avantag Energy and its associate Philipp Rass Energy
- Investing in green heat generation plants, including building a plant to provide backup and cover peak load in our district heat supply, building a river heat pump and the new grids required for this
- Building solar parks and a windfarm and taking these over into our proprietary portfolio
- Constructing a further bio-waste anaerobic digestion plant
- Installing a new plant technology to produce phosphorous from sewage sludge in Mannheim
- Maintaining and renewing our distribution grids to safeguard supply reliability.

PRESENTATION OF FINANCIAL POSITION

Current and non-current financial debt grew by Euro 31 million to Euro 1,917 million. The taking up of new loans and issue of a promissory note loan were countered by repayments of existing loans. At the same time, cash and cash equivalents rose by Euro 627 million to Euro 1.885 million, a development due above all to high inflows of security deposits for counterparty default risk (margins) in the period under report, as well as to the disposal of companies. Overall, **net financial debt** (current and non-current financial debt less cash and cash equivalents) fell by Euro 596 million to Euro 32 million. Net financial debt excluding margins stood at Euro 1,449 million (previous year: Euro 1,450 million).

Based on lower earnings before taxes (EBT) compared with the previous year, the elimination of non-cash and non-operating income and expenses led the **cash flow before working capital and taxes** to increase by Euro 63 million. The largest item in this elimination related to the non-cash-effective measurement of derivatives pursuant to IFRS 9. By contrast, this cash flow figure was negatively affected by the reclassification of non-operating income from sales of fully consolidated and at-equity companies to the cash flow from investing activities.

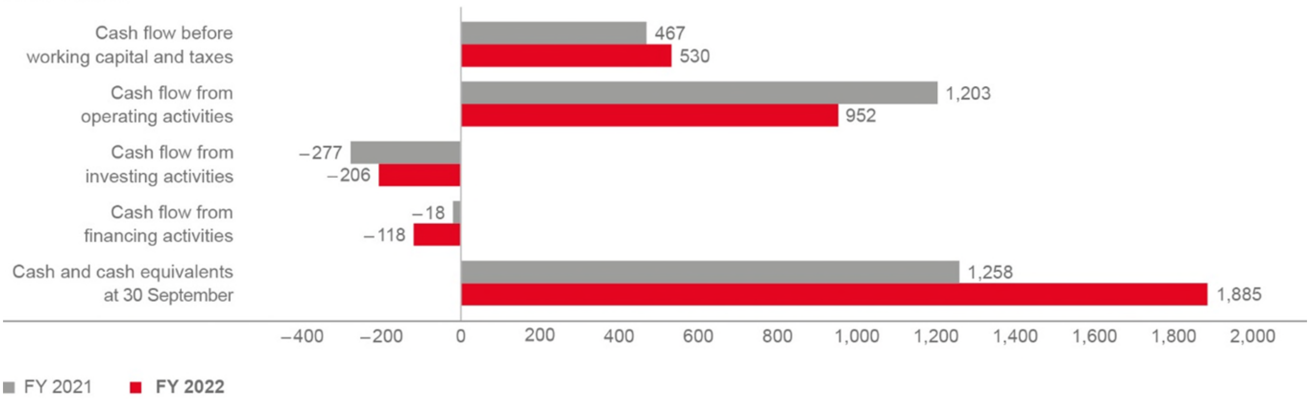
The **cash flow from operating activities** fell year-on-year by Euro 251 million. This resulted above all from lower inflows of security deposits for counterparty default risk (margins). From an operating perspective, factors reducing the cash flow more significantly than in the previous year chiefly included the more marked rise in trade receivables due to the higher level of wholesale prices on energy markets and the higher increase in inventories. These factors were countered, with a correspondingly positive impact, in particular by the invoicing of projects in our project development business and the more marked rise in trade payables due to the higher level of wholesale prices on energy markets.

The development in the **cash flow from investing activities** was mainly shaped by higher proceeds from the sale of fully consolidated and at-equity companies in the period under report. These were countered by higher payments for the acquisition of companies in the period under report, as well as by higher payments for investments in non-current assets. Overall, the cash flow from investing activities decreased year-on-year by Euro 70 million.

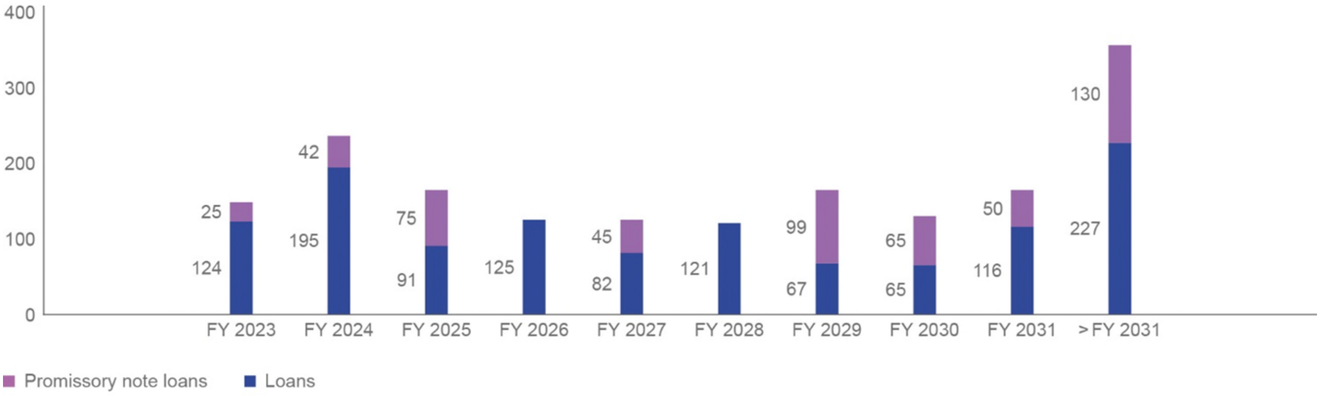
The **cash flow from financing activities** fell by Euro 100 million compared with the previous year, a development which mainly resulted from a lower volume of net new borrowing.

At 30 September 2022, MVV posted **cash and cash equivalents** of Euro 1,885 million (30 September 2021: Euro 1,258 million). Excluding margins, cash and cash equivalents amounted to Euro 468 million (previous year: Euro 436 million).

CASH FLOW STATEMENT
Euro million



REPAYMENT PROFILE
Euro million



Financial management

Our access to the capital markets is as strong as ever, meaning that we have no difficulty in covering MVV's liquidity requirements. We benefit here from our strong creditworthiness, our diversified business portfolio and our corporate strategy, which focuses on sustainable and profitable growth. MVV has very strong liquidity in the form of cash funds and firmly committed bank credit lines.

Our repayment profile shows consistency over a horizon of several years.

At the balance sheet date, MVV Energie managed a cash pool for itself and 31 companies in our Group. In this capacity, it manages, procures and secures both its own short-term liquidity and that of subsidiaries included in the pool. Long-term financing required for investments is provided to the subsidiaries in the form of shareholder loans.

Credit rating

MVV is not assessed by any rating agencies. In the rating talks we hold with our core banks, however, we receive regular feedback on our creditworthiness. Based on this information, we can assume that MVV continues to be classified at stable investment grade level.

COMBINED NON-FINANCIAL DECLARATION

General information

By publishing this Combined Non-Financial Declaration (NFD), we have complied with our reporting obligations in accordance with § 289b (1) and § 315b (1) of the German Commercial Code (HGB). We submit the NFD both for the MVV Group (MVV) and for its parent company, MVV Energie AG. The guidelines and concepts applied by MVV and MVV Energie AG are consistent with each other; no non-financial targets refer solely to MVV Energie AG. The NFD comprises this chapter and forms a constituent part of the combined management report. In connection with Regulation EU 2020/852 (EU Taxonomy), we have published the key performance indicators required by Article 8 of the EU Taxonomy and the supplementary Delegated Act for the first time for the 2022 financial year. These involve the shares of sales ("turnover"), investments ("CapEx") and operating expenses ("OpEx") associated with taxonomy-aligned economic activities and supplementary qualitative disclosures. Furthermore, we report on the processes introduced at MVV to promote ongoing implementation of the EU Taxonomy. All disclosures made pursuant to Article 8 of the EU Taxonomy can be found in the section EU Taxonomy at the end of this NFD.

The reporting in the NFD refers to MVV and thus, as in other sections of this Annual Report, to all subsidiaries fully consolidated in the consolidated financial statements. For select key figures in the environmental aspects section, we additionally provide information on shareholdings recognised at equity. If, for select reporting topics, we focus on our main locations in Mannheim, Offenbach, Kiel and Wörrstadt, then we indicate this accordingly. To avoid redundancies within our combined management report, in relevant sections of the NFD we refer to further information included in other chapters. References to disclosures outside the combined management report constitute supplementary information and do not form part of the NFD.

The Supervisory Board commissioned PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Munich, to perform a limited assurance audit on the NFD. This was based on the International Standards on Assurance Engagements ISAE 3000 (revised). The audit opinion can be found in the chapter Other Disclosures.

From 1 January 2023, MVV will be subject to the scope of application of the German Act on Corporate Due Diligence Obligations for the Prevention of Human Right Violations in Supply Chains (LkSG), which was adopted in summer 2021 and lays down new requirements for processes and reporting on aspects relevant to human rights. We have reviewed the statutory requirements in connection with our existing supply chain-related processes and will ensure that these are complied with at MVV.

We are consistently working to minimise any potentially negative implications of our business activities and to make measurable contributions to transforming the energy supply and protecting the climate and environment. In our Annual Report and on our website, we have for many years now provided information about the challenges we face and the progress we have made as a company that acts sustainably. Moreover, we will publish our Sustainability Report for the 2022 financial year on our website in February 2023. We prepare this in accordance with the GRI Standards of the Global Reporting Initiative. By publishing the Sustainability Report, we will in customary form satisfy the transparency requirements of our stakeholders – and go beyond our statutory reporting obligations.

The contents of the NFD and our Sustainability Report are determined on the basis of our materiality analysis. To perform this, we continually monitor public discussions and the positions of our stakeholders. We regularly assess whether and how the relevance of our material topics has changed. This multistage process includes:

- Desk-based research and internal analysis
- Surveys of those specialist departments which have interfaces with our external stakeholder groups
- Workshops and interviews with select stakeholders
- External online surveys of MVV's stakeholders and customers
- Use of external AI-based data providers

We review all aspects of the materiality process every three to four years, most recently in the 2021 financial year. Moreover, we also update the main characteristics and prioritisations on an annual basis. In terms of its contents, the materiality analysis also accounts for global challenges and megatrends, Sustainable Development Goals, industry and technology-related trends and the expectations of our internal and external stakeholders. Our materiality analysis comprises three content-related perspectives, namely stakeholder relevance, business relevance and impact of our business activities. Analysing these dimensions enables us to meet the various requirements placed in the materiality analysis by different reporting standards.

To identify which sustainability topics are particularly significant to us, in 2022 we performed a materiality analysis in accordance with GRI Standards and voluntarily supplemented this with the business relevance dimension. In the second stage, we allocated the results of this analysis, where applicable, to the aspects listed in § 289c HGB, namely environmental concerns, employee concerns, social concerns, respect for human rights and combating corruption and bribery. We reviewed which disclosures were needed for these aspects to provide an understanding of the course of business, business results and situation of MVV Energie AG and the MVV Group, as well as the implications of our business activities for these aspects. As in previous years, this review showed that fewer aspects are relevant for the NFD than we report in our GRI Sustainability Report. The table on the following page provides an overview of these aspects. We base our description of concepts and our non-financial key figures in this NFD on GRI Standards; in our Sustainability Report for the 2022 financial year, which will be published in February 2023, we will meet these standards.

Business model and risk analysis

We are pursuing a long-term sustainability-driven strategy. This involves providing our customers with a supply of energy that is generated in ways that are as environmentally friendly as possible and supporting them with innovative solution enabling them to implement their own energy transformation and achieve climate neutrality. We cover all major stages of the energy industry value chain. Further information can be found in the chapters Business Model and Corporate Strategy.

Within our existing risk management system, which is described in the chapter Opportunity and Risk Report, we record and evaluate all material risks, including non-financial risks, that are associated with our business activities and business relationships. The review process performed on non-financial risks in the 2022 financial year concluded that there were no risks which satisfied the materiality criteria set out in § 289c (3) Nos. 3 and 4 HGB.

One dominant development in the year under report was the war in Ukraine and resultant disruption on energy markets. We report on this in the chapter Business Framework. This situation gave rise to financial and non-financial risks that were continually recorded and evaluated by our risk management. In this context, one knock-on effect involves climate protection: The generation structure in Germany changed, with an increase in coal-based electricity generation in particular in order to consume less natural gas. For the energy industry and energy companies, this resulted in a temporary rise in CO_2 emissions. This development has reduced the likelihood of Germany meeting its national CO_2 targets or of being able to comply with the CO_2 budgets for 1.5 degrees Celsius. We explain how we are reacting to this situation in the environmental concerns aspect in the section Climate Neutrality.

We are also carefully monitoring the ongoing coronavirus pandemic and its implications. Its impact on our own business processes and activities is not only direct. As well as our employees, our business partners and customers also face direct and indirect potential health risks. The pandemic continues to impact on our operating business and on the political implementation of the energy transition and decarbonisation, whether due to shifting political priorities or changed fiscal scope. However, the focuses set by the Federal Government to date are moving more closely towards transforming the economy and society along the lines of climate neutrality. This approach is also to be viewed in connection with the final section of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), released in spring 2022, which calls for accelerated implementation of climate protection measures.

Sustainability management

Our sustainability management focuses on those topics, processes and measures that we view as forming part of our core business (please also see the chapter Business Model) and is based on our corporate strategy (find out more in the chapter Corporate Strategy). Our strategic decarbonisation and sustainability targets (here we refer to the section Environmental Concerns Aspect) were adopted by the Executive Board and discussed by the Supervisory Board; they form an integral component of our corporate strategy and of the business field strategies adopted on this basis.

Our sustainability management is anchored on various levels of the Group. The Executive Board bears overall strategic responsibility. The sustainability department, which is located in organisational terms in our group strategy and energy industry department, coordinates the sustainability strategy, reports to the Executive Board and relevant bodies and manages the groupwide sustainability programme. This department shares information across business fields and is also where projects and measures are planned and implemented. Moreover, sustainability management is also responsible for major aspects of MVV's stakeholder management. The specialist departments continually review, evaluate and manage MVV's performance based on sustainability indicators and medium-term targets. For many years now, we have evaluated investment projects by reference to sustainability criteria and in terms of the contribution they make to our decarbonisation and sustainability targets. The measures and management systems are implemented on an operative level by the business fields acting under their own responsibility.

Disclosures on contents of combined non-financial declaration

Contents of combined non-financial declaration

Aspects pursuant to § 289c HGB	MVV area of action pursuant to MVV materiality analysis according to GRI	Disclosures on concepts, targets, measures, results, due diligence processes and non-financial key figures pursuant to § 289c HGB in section
Environmental concerns	Energy system transformation	Climate neutrality Renewable energies and energy transition Supply reliability
	Environment and resources	Resource efficiency Local environmental protection Sustainable circular economy
Employee concerns	Social responsibility	Employer attractiveness
Social concerns	Social responsibility	Corporate social responsibility
Respect for human rights and combating corruption and bribery	Social responsibility	Responsibility for supply chain and human rights Compliance and respect for human rights

Environmental concerns aspect

Climate neutrality

The final section of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) made it clear that stricter climate protection measures are required both globally and nationally as the remaining CO_2 budget has decreased. Published at the beginning of 2022, this IPCC report underlines the need to limit the rise in global temperatures to 1.5 degrees Celsius, as the overall ecosystem risks passing irreversible tipping points. Moreover, the level of vulnerability, i.e. the extent to which a system such as an ecosystem, economic system or social system is threatened by changes in the climate, will otherwise increase disproportionately. As temperatures rise, the frequency and intensity of extreme weather events will significantly increase. This will also be the case in Germany. For example, extended periods of heat and drought such as those in summer 2022 will occur ever more frequently. According to the IPCC, it is still possible to limit global warming to 1.5 degrees Celsius, but only if a significant portion of the required reduction in CO_2 is achieved in the current decade already. Here, industrial countries, and the EU in particular, will have a key role to play as they can demonstrate the compatibility of economic growth, prosperity and climate protection.

In the EU, climate neutrality is to be achieved by 2050 at the latest. In the German Climate Protection Act (KSG), the Federal Government stipulated in 2021 that Germany should become climate neutral by 2045 already. It will be necessary to achieve negative emissions from the 2040s onwards in order to offset unavoidable emissions, such as those from agriculture. We describe the associated developments in energy policy in the chapter Business Framework. We have accorded great importance to climate protection, decarbonisation and renewable energies for many years already.

Energy industry has a key role to play

To achieve climate neutrality, the energy industry has to quickly reduce its direct emissions to zero. This means doing entirely without fossil fuels. The great challenges for the 2020s involve rapidly exiting from coal-based power generation, reducing energy consumption in absolute terms and the use of heating oil, and that in parallel with completing the exit from nuclear energy. At the same time, it will be necessary to build or modernise the infrastructures needed to safeguard a fully climate-neutral energy supply by 2040 at the latest. This involves accelerating the expansion in renewable energies and the infrastructures needed to generate, transport and use climate-neutral gases. These are the technical preconditions enabling the use of fossil-based natural gas to be gradually phased out in the 2030s while simultaneously upholding supply reliability. With the National Hydrogen Strategy adopted by the Federal Government in 2020 and the beacon projects already initiated, lawmakers have provided initial political momentum for facilitating the transition from fossil-based natural gas to green hydrogen, particularly for industry. The war in Ukraine has further underlined the importance of this topic and the significant role played by dependence on natural gas and associated energy security considerations. It is now crucial for lawmakers to lay the right foundations: Liquid natural gas (LNG) can only provide temporary assistance. Gas consumption, whether fossil-based or green, has to be significantly reduced throughout the economy. With the transition from natural gas use to electricity-based applications or other renewable energies, part of the existing natural gas grid structure will no longer be needed in the long term. The remaining sections of grid infrastructure are expected to be transformed from natural gas to hydrogen, especially for industry. Associated transformation planning is being promoted nationwide by the H2vorOrt (H2 on Location) initiative.

The short-term increase in CO_2 emissions in the energy industry is one factor that makes it necessary to convert to renewable energies even more quickly. Due to the geopolitical consequences of the war in Ukraine, the volume of coal-based electricity generation is rising in order to safeguard supply reliability. The additional CO_2 emissions arising as a result are reducing the remaining emissions budget for the 1.5-degree trajectory. These additional emissions will have to be saved again by 2045. This can only be achieved by converting even more quickly to 100 % renewable energies, and here in particular by increasing domestic energy production from wind and solar power and importing green hydrogen. The current setback due to geopolitical developments will therefore have to be offset with greater tempo in future. Due to the complexity involved and pace required, the installation of a new energy infrastructure in less than one generation also represents a great social and financial challenge. Rising interest rates and sector risk premiums, decreasing macroeconomic growth potential and geopolitical uncertainties – these factors increase the costs of capital and reduce investment potential in a period requiring the allocation of very large volumes of capital to green energy infrastructures and climate protection technologies. Despite this difficult climate, MVV is maintaining a very high pace of investment in the energy transition.

Like all other sectors, the energy industry will also have to reduce its indirect emissions to zero. These are emissions arising at upstream suppliers and end customers. In this regard, full climate neutrality will only be achieved when other economic sectors also succeed in protecting the climate. We report our direct and indirect CO_2 emissions in Scopes 1, 2 and 3 in our climate balance sheet (see section MVV’s Climate Balance Sheet within Climate Neutrality).

Climate neutrality is only an interim stage

The German Climate Protection Act (KSG) states that, by 2045, greenhouse gas emissions have to be reduced far enough for the country to achieve “net greenhouse gas neutrality”. The target hereby formulated is consistent with the terms agreed in the Paris Climate Agreement and means that all greenhouse gas emissions caused by people will have to be removed from the atmosphere in other areas to enable the climate balance sheet to reach zero and global temperatures to stabilise. Net zero is increasingly used as the term to summarise this process for political and communication purposes. Particularly on company level, the term climate neutrality is increasingly used to refer to strategies in which the focus is not on reducing fossil-based energy to zero (“net zero”) but on achieving arithmetic neutralisation by working with offsetting measures. In this context, it is often significant that companies only implement those climate protection measures that are economically viable rather than all measures that would be technically possible. As the 2022 IPCC Report makes clear, however, it will be necessary not only to forego all use of fossil-based energies; the net balance sheet will have to become negative by the middle of the century, meaning that CO_2 will have to be permanently removed from the atmosphere. MVV has coined the term #climatepositive to describe this process. We will be one of the first energy companies to achieve negative overall emissions, and that without drawing on offsetting certificates.

#climatepositive is our target

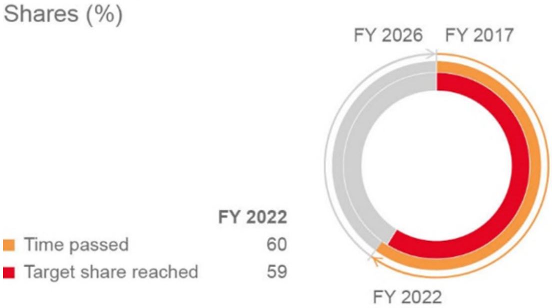
At MVV, we define net zero as follows: We do not exclude any sources of emissions from our climate balance sheet and thus from our decarbonisation targets. We include all direct and indirect sources of emissions at our fully consolidated companies and, on a voluntary basis, the prorated share of emissions at our at-equity shareholdings. This way, we also assume responsibility for emissions arising at our customers due to the products we sell, such as natural gas, as well as for indirect greenhouse gases at our upstream suppliers, such as those emitted in the production of wind turbines and photovoltaics systems. We do not account for any offsetting measures but do include negative emissions for CO_2 permanently removed from the atmosphere. For MVV, climate neutrality – and net zero – is achieved when, on portfolio level, we have reduced our direct and indirect emissions by at least 95 % in absolute terms and offset potential technically unavoidable residual emissions with our own permanent CO_2 sinks. We will reach this target at the latest by 2040. We understand residual emissions as involving those unavoidable greenhouse gas emissions which we cannot reduce any further in technical terms by drawing on other alternatives for the same application. Current examples here are the incineration of waste or upstream emissions resulting from ground movements in agriculture. To achieve full climate neutrality here as well, we will offset these unavoidable residual emissions in the long term with our own CO_2 sinks in MVV's portfolio or ensure permanent and secure storage of the greenhouse gases.

In the long term, we will go one step further and become climate positive as a company. Our climate balance sheet will show negative emissions due to additional CO_2 sinks from 2040 at the latest. As a company, and including emissions at our customers and suppliers, MVV will be climate positive.

To meet our targets, we are investing in sustainable growth. We have aligned our investment programme, which is broad-based and has a long-term focus, to our ambitious decarbonisation and sustainability targets. In future, we will be drawing even more closely on the opportunities arising in the course of the energy transition. For the period from 2016 to 2026, we have set ourselves the following target:

We are investing Euro 3 billion in the energy system of the future.

INVESTMENTS
Shares (%)



MVV's decarbonisation targets in the Mannheim Model

Our decarbonisation targets are the centrepiece of our Mannheim Model, which directly links climate protection with our corporate strategy.

Our actions will be determined by ensuring that our company's development is compatible with the 1.5-degree trajectory. We are aware that the reduction trajectory set out in the 2021 German Climate Protection Act (KSG) is not sufficient to meet the 1.5-degree target. The reduction in our direct energy industry emissions on the decarbonisation trajectory for the overall energy sector in Germany is therefore only an approximation.

MVV is going beyond the political targets set in the German Climate Protection Act (KSG) and the EU's Green Deal, which are based on specific reference years, such as 2030 and 2045. Internally, we are pursuing a budget-based approach, i.e. taking account of various allocation methods we intend not to exceed a maximum remaining CO_2 budget. We have decided not to include this information in our external reporting as the associated developments in energy generation and turnover over extended periods in some cases constitute competition-relevant information.

For our company-specific decarbonisation targets, we continue to take 2018 as our base and reference year and to set milestone year-based targets to document our progress for the general public.

For indirect greenhouse gas emissions (Scopes 2 and 3), existing norms do not permit the derivation of any suitable decarbonisation path, not least due to the highly heterogeneous structure of our international value chain. We therefore refer to the 1.5-degree decarbonisation trajectory recommended by the Science Based Target initiative for the energy industry sector as guidance and as a minimum reduction path for Scopes 2 and 3.

In terms of the groupwide decarbonisation targets set within the Mannheim Model, we go well beyond the decarbonisation trajectory set out in the KSG legislation. While the KSG provides for a 64 % reduction in CO_2 emissions in the energy industry between 2018 and 2030 and calls for climate neutrality by 2045, we aim to be notably more ambitious in implementing climate protection and reduce our CO_2 emissions significantly faster than the sector. To achieve this, we are pressing ahead with the electricity transition and associated expansion in renewable energies, as well as supporting our customers in their own decarbonisation; above all, we are promoting the heat transition.

We aim to be one of the first climate-positive energy companies in Germany.

From 2040 at the latest, we will not only be net zero in terms of all our direct and indirect emissions sources; we will actually be climate positive. We aim to achieve this on the one hand by deploying suitable technologies to remove greenhouse gases from the atmosphere on a permanent basis. On the other hand, with our services and green products we will support our customers, whether they are private households, companies or local authorities, to become climate neutral themselves. To this end, we are further expanding our portfolio of climate-neutral products and services.

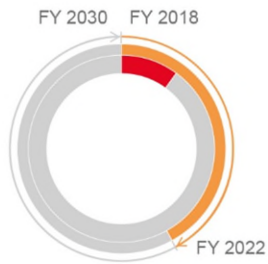
MVV validated by Science Based Target initiative under net zero standard
Our decarbonisation targets were certified by the Science Based Target initiative (SBTi) several times in 2021 already. Back in 2015, we were one of the first European companies to join the SBTi, and that ahead of the Paris Climate Agreement already. Since then, MVV's sustainability and decarbonisation targets have been reviewed by the SBTi on several occasions. In 2021, MVV was the first German energy company to receive certification that it was pursuing a scientifically verified 1.5-degree trajectory. In autumn 2022, MVV was the first German energy company, and only the third worldwide, to receive validation based on the new and even stricter net zero standard. This provided further confirmation that our medium and long-term sustainability and decarbonisation targets comply with the strictest standards. These Mannheim Model targets form the basis for our strategic group planning, which we operationalise within the company with further detailed and interim targets. Our corporate strategy is specified in greater detail on a decentralised basis by our business fields. On group level, the investments made by all business fields are assessed in terms of their contribution to #climatepositive.

In what follows, we present our targets, areas of action and activities:

By 2030, we will reduce our energy industry Scope 1 emissions by more than 80 % compared with 2018.

REDUCTION IN ENERGY INDUSTRY CO_2 (SCOPE 1)
Shares (%)

	FY 2022
Time passed	42
Target share reached	10

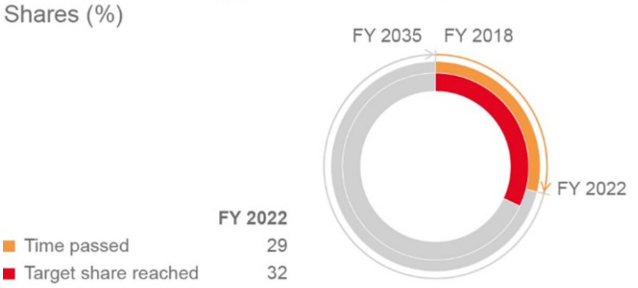


This corresponds to emissions of less than 0.5 million tonnes in 2030 (Scope 1). Key decarbonisation measures for direct emissions (Scope 1) are:

- We will maintain a high pace of expansion for renewable energies to generate electricity and green heat with the aim of providing our customers with a fully climate-neutral, failsafe and affordable energy supply.
- We will convert our district heat supply for Mannheim and the region to 100 % green energy sources by 2030 at the latest.
- We will consistently press ahead with the coal exit decided by lawmakers.
- We are reducing the use of fossil-based natural gas at existing plants by adding renewable energies and using green gases.
- We will not build any new (CHP) power plants fired by fossil-based natural gas for the general public supply, i.e. electricity and district heat.

By 2035, we will reduce indirect greenhouse gases (Scopes 2 and 3) by more than 80 % compared with 2018.

REDUCTION IN CO_2 (SCOPES 2 AND 3)
Shares (%)



This corresponds to emissions of less than 1.5 million tonnes (Scope 3) by 2035. Key decarbonisation measures for indirect emissions (Scopes 2 and 3) are:

- We support our customers in achieving their own climate neutrality by promoting the procurement and supply of green energy and offering services and solutions for their own energy transitions and energy efficiency.
- We are gradually making our products and services 100 % climate neutral. When it comes to supplying green energy to our customers, we are already able to offer all necessary products and services.
- From 2035, we will no longer offer any fossil-based energy forms for sale, but then rather supply our customers exclusively with green energy.
- In our procurement of goods and services right through to power plants, we ensure that our suppliers aim for ambitious reductions in their CO_2 footprints.
- We are enhancing our own energy efficiency and using green energies in our own buildings and to operate our grids.

Our approach to unavoidable residual emissions
In our climate balance sheet, we have voluntarily reported the total waste-related emissions at our power plants fired by waste and refuse-derived fuels as a separate line item for many years now. As a basic public service, waste incineration forms part of the disposal mandate for non-recyclable municipal and commercial waste. Due to the general ban on landfilling in Germany, there is a statutory obligation to incinerate untreated municipal waste at waste incineration plants (energy from waste plants/EfW plants).

Around half of the non-recyclable waste incinerated at energy from waste plants comprises biological components, such as bio-waste, paper residues, cellulose components and woody residues. Where no better technical alternatives are available for the same application, the other half of the non-recyclable waste generates unavoidable greenhouse gases. These are attributed to the products thereby incinerated and the disposal process, rather than to the energy products derived in the form of the waste heat used. Based on technology currently available, it is not yet possible to sort the non-recyclable waste delivered, particularly municipal waste delivered by local authorities, in such a way that significant volumes can be treated and made available for use other than incineration.

The energy acquired from waste heat at the energy from waste plants makes a material contribution towards protecting the climate as it reduces the use of fossil-based fuels harmful to the climate. As this waste heat arises in any case due to the municipal disposal mandate and would otherwise remain unused, the law states that the energy acquired from waste heat at the energy from waste plants counts as CO_2 neutral. The district heat produced by these plants is therefore also CO_2 neutral and placed on a par with renewable energies when it comes to building energy assessments. Compared with other players in the sector, our energy from waste plants also have very high energy efficiency levels. The plant in Mannheim is one of the most energy-efficient plants worldwide.

By adding CO_2 capture technologies and storing or using CO_2 on a long-term basis, energy from waste plants can also achieve physical climate neutrality. When biogenic emissions sources are used, end-to-end concepts of this nature are referred to as Bio-Energy Carbon Capture Utilisation and Storage (BECCUS). If it can be ensured that the CO_2 thereby captured remains permanently bound, then the biogenic share of emissions involves “negative emissions”. Consequently, the share of non-biogenic emissions thereby captured is made CO_2 neutral. This way, energy from waste plants not only become climate neutral in the long term; they even turn climate positive, i.e. become large-scale industrial CO_2 sinks. Thanks to BECCUS, the CO_2 previously bound in the biomass is no longer returned to the atmosphere. This helps to reduce the global concentration of CO_2. The technology used to capture CO_2 is already mature, yet options for sustainable implementation are still limited by a current lack of political regulation, limited acceptance within society, a lack of CO_2 transport infrastructures and economic viability. We therefore only expect to see widespread application in the course of the 2030s.

We are closely reviewing the technical, economic and ecological feasibility of fitting our own energy from waste plants with CO_2 capture and downstream CO_2 storage paths. We will deploy this technology on a permanent basis as soon as long-term, sustainable and secure storage or long-term recirculation of the CO_2 can be ensured and the political and social framework permits its use. We assume that the CO_2 thereby captured will be stored in gas fields beneath the North Sea that are already empty rather than in Germany. For this “export” of CO_2, existing legal hurdles will still have to be dismantled in the medium term. Moreover, clear regulation will be required to determine that negative emissions generated this way are imputed to or tradable in the EU-ETS or in the national scope of the German Fuel Emissions Trading Act (BEHG).

BECCUS and other negative emissions technologies, such as generating biomass carbonates from pyrolytic carbonisation of plant-based raw materials, will play the decisive role in turning MVV into a climate-positive company by 2040 at the latest. Should it be technically, politically and economically viable to capture and store the CO_2 at an earlier date, then we will accelerate the implementation of our activities in this area. Today, we already generate a low volume of negative emissions in connection with CO_2 capturing at our bio-waste anaerobic digestion plant in Dresden. The CO_2 captured there is made available for industrial use in other sectors.

Key decarbonisation measures for unavoidable residual emissions are:

- We are extending our own expertise in the field of BECCUS for energy from waste and biomass plants and seeking to exchange views and experience with relevant players in business and science, within society and in the political arena.
- We will build a first CO_2 capture pilot plant, most likely in 2023, at the energy from waste plant in Mannheim in order to gain expertise in the operating processes, logistics and technology required for BECCUS on an industrial scale.
- We are pressing ahead with feasibility analyses and plans through to preparing plant technology at our energy from waste and biomass plants with the aim of making it possible to implement BECCUS from the 2030s.
- We aim to create proprietary CO_2 sinks for unavoidable residual emissions or facilitate the permanent and secure storage or use of greenhouse gases (BECCUS).
- We are reviewing and piloting further technologies for negative emissions, such as the generation of biomass carbonates aimed at permanently demobilising the constituent carbon. We are capturing CO_2 at one of our bio-waste anaerobic digestion plants and looking into ways of putting this to industrial use.

Rising CO_2 emissions in the 2022 financial year

Previously unforeseeable developments on the commodity markets due to the war in Ukraine also impacted directly on MVV. The short-term substitution of coal-based electricity generation for gas-based generation, a move called for by energy policy, led to an increase in production volumes, particularly at our at-equity shareholding Grosskraftwerk Mannheim AG (GKM), and thus to higher volumes of pro-rated CO_2 emissions.

From both political and business perspectives, it is a difficult matter of balancing competing targets: upholding supply reliability and avoiding any gas shortage in the short term while ensuring compliance with self-imposed climate protection targets in the medium and long term. After in-depth consideration, MVV decided to prioritise upholding supply reliability for its industrial, commercial and household customers in the short term, with the effect that its CO_2 emissions will also rise in the short term. Matters of energy and security policy played a crucial role in this decision. The review currently still underway as to whether the district heat backup plants being built at the Mannheim location should be fitted for bivalent use in future is also to be viewed in this context. This would enable us, in the event of any shortage, to use heating oil – alongside natural gas – and thus lower our dependency on the latter and guarantee the highest level of supply reliability for our district heat. Based on current developments, we have to assume that this exceptional situation on the energy markets will still have repercussions for future financial years as well.

With regard to the 2022 financial year, this meant that our Scope 1 CO_2 emissions grew by 4 % overall. That is a development we had neither planned nor expected. Our decarbonisation path is based on a contracting climate balance sheet, even if we expect this development to be graded rather than linear. Being realistic, the ongoing tense situation on the energy markets obliges us to assume that we will fall short of the required decarbonisation path in subsequent years as well. Should Block 7 at Grosskraftwerk Mannheim, a coal-based generation block which is in the grid reserve, be called on to produce electricity for the market again on a temporary basis, then this could also involve increased emissions.

We are aware that current and foreseeable additional emissions will significantly reduce the remaining budget required to comply with a 1.5-degree trajectory. In view of this, MVV immediately introduced operative and strategic measures to additionally save these extra emissions over the next ten years. This way, we aim to ensure that we can nevertheless comply with our long-term decarbonisation targets. These measures include stepping up the expansion of renewable energies in our own portfolio. Furthermore, once the tense current situation in the German gas and electricity markets has eased we will manage our conventional generation portfolio even more closely on the basis of its CO_2 emissions.

Irrespective of these developments, we pressed ahead once again in the 2022 financial year with numerous projects and activities that will shrink our CO_2 balance sheet in the medium term. Examples here include:

- Building the river heat pump with a capacity of 20 MW_t at the Mannheim location
- Extending our proprietary renewable generation portfolio by 50 MW_e
- Extending our range of solutions: further developing our B2B advisory services, including sustainability and climate protection management, planning and building photovoltaics systems and electric charging infrastructure, implementing sustainable solutions for our customers' own energy transitions. Thanks to Avantag, the subsidiary acquired in the 2022 financial year, for example, we can launch operations with significantly greater volumes of photovoltaics at our customers.
- Group-wide inventory of SF_6 gases, i.e. the greenhouse gas sulphur hexafluoride, and identification of measures to reduce emissions
- Increased sales activities for green commodities, also aimed at reducing consumption of fossil-based natural gas
- Improvement in the basis of data for our CO_2 footprint for Scope 3 emissions
- Active participation in municipal climate protection activities at our locations, such as our involvement in the 2030 Climate Action Plan of the City of Mannheim

MVV’s climate balance sheet

In our climate balance sheet, we distinguish between direct and indirect CO_2 emissions.

STRUCTURAL COMPOSITION OF OUR CLIMATE BALANCE SHEET

36 %

Scope 3 upstream

- Purchased electricity and heat
- Purchased goods and services
- Upstream emissions for fuels and transport
- Grid losses for purchased electricity and heat
- Business travel and employee commuting

2 %

Scope 2[1]

- Grid losses in proprietary grids
- Energy consumption at business locations

41 %

Scope 1

- Energy industry: energy generation (electricity, heat)
- Disposal industry: EfW, RDF
- Methane and sulphur hexafluoride emissions in grid and plant operations

21 %

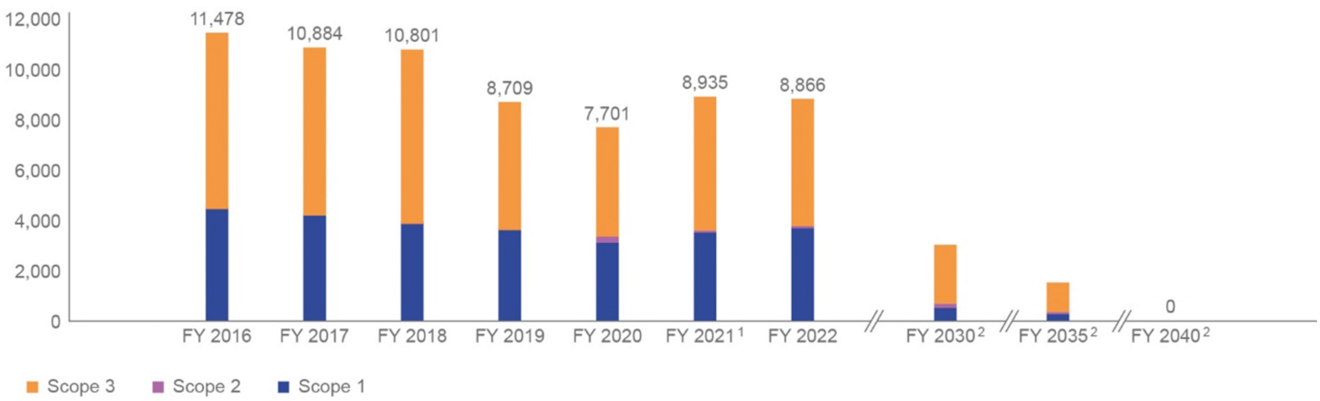
Scope 3 downstream

- Burning by end customers of natural gas sold
- Emissions from customer use of sold products and generation plants
- Emissions from customer disposal of sold products
- Waste

1 Location-based

DEVELOPMENT IN TOTAL EMISSIONS

Fully consolidated and at-equity companies
1,000 tonnes CO_{2eq}



1 Previous year’s figures adjusted
2 Target figures: simplified assumption of linear development for Scope 1 in 2035 and Scope 3 in 2030

The generation of energy at our proprietary plants or at plants from which we procure contingents gives rise to direct CO_2 emissions. These are designated as Scope 1 under the Greenhouse Gas Protocol.

On the one hand, direct CO_2 emissions are influenced by weather-based demand for heat, as well as by movements in wholesale prices. These factors cannot be influenced by MVV but are reflected in capacity utilisation rates at our generation plants. On the other hand, the medium to long-term development in direct emissions largely depends on the dates at which existing plants which use fossil-based fuels are decommissioned and on the new plants required to uphold the supply.

Our direct Scope 1 emissions showed a year-on-year increase of 4 % in the 2022 financial year. The main reason for this was the increased production at coal-based CHP plants due to the changed market situation in connection with the geopolitical consequences of the war in Ukraine. We describe this in the chapter Business Framework.

Indirect CO_2 emissions, Scope 2, mainly result from the energy we use for our business operations outside energy generation. These emissions are only of subordinate significance at MVV and were 28 % higher in the year under report than in the previous year.

Indirect CO_2 emissions, Scope 3, comprise greenhouse gases arising in upstream and downstream stages of the value chain. CO_2 emissions in upstream value chain stages arise at suppliers manufacturing products and services purchased by MVV. These relate, for example, to the production of photovoltaics systems and wind turbines or the procurement of electricity not generated by MVV. Emission activities in downstream stages of the value chain chiefly involve the use of natural gas supplied by MVV to its customers. The annual development in Scope 3 emissions is chiefly determined by sales volumes for electricity, gas and heat, as well as by volumes in the renewable energies project development business. This key figure also includes emissions from non-commodities procurement activities. In the interests of transparency, from the 2022 financial year we are reporting further non-material emissions sources in our climate balance sheet.

The reduction in Scope 3 emissions by 4 % in the 2022 financial year largely reflects the lower volume of gas turnover and the development in our project development business. We still expect the overall trend in our total direct and indirect emissions to continue in future and to be able to meet our decarbonisation targets for 2030, 2035 and 2040.

Ongoing high volume of net CO_2 savings achieved
In 2016, we set ourselves the target of tripling our CO_2 savings in the entire climate system to 1 million tonnes a year. We reached this target in the 2021 financial year already, and thus within half of the time originally planned. In the 2022 financial year, we virtually matched the high volume of net CO_2 savings achieved in the previous year.

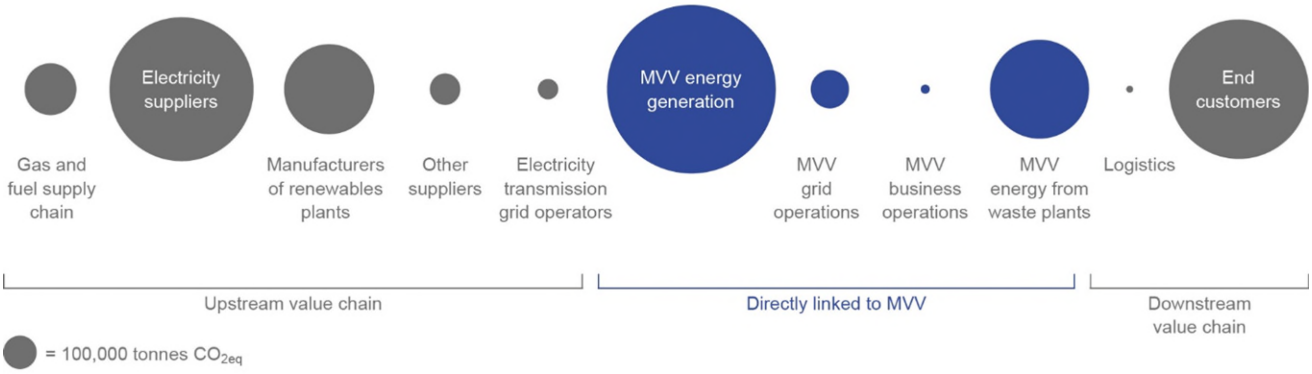
Rise in specific CO_2 emissions
The higher volume of conventional electricity generation led to a year-on-year increase in the specific CO_2 emissions for our generation portfolio.

Specific CO_2 emissions in the groupwide generation portfolio

g CO_2/kWh	**FY 2022**	FY 2021
Electricity generation	460	422
Heat generation	122	124
Energy generation in the generation portfolio	249	231

We again operated our plants in accordance with the approvals granted and relevant legal requirements in the 2022 financial year. We continually monitored compliance with the threshold values applicable to the plants.

DIRECT AND INDIRECT CO_2 SOURCES AT MVV
Fully consolidated companies and companies recognised at equity



Climate balance sheet
Fully consolidated companies and companies recognised at equity

1,000 tonnes CO_{2eq}	**FY 2022**	FY 2021	+/– change	% change
Direct CO_2 emissions (Scope 1) [1, 2]	3,647	3,510	+ 137	+ 4
Energy industry activities [2]	2,701	2,561	+ 140	+ 5
of which CH_4 emissions [3, 4]	55	69	– 14	– 20
of which SF_6 emissions [4, 5]	1	5	– 4	– 80
Disposal activities (TAB) [6]	946	949	– 3	– 0
Indirect CO_2 emissions (Scope 2) [2, 7]	147	115	+ 32	+ 28
of which energy procured for proprietary plants [2]	7	7	0	0
of which energy used for grid operations [2]	140	108	+ 32	+ 30
Indirect CO_2 emissions (Scope 3) [2]	5,072	5,310	– 238	– 4
of which purchased goods and services (GHG category 1) [8]	872	986	– 114	– 12
of which fuel and energy-related activities (GHG category 3)	2,302	2,270	+ 32	+ 1
of which waste generated in operations (GHG category 5) [4]	1	1	0	0
of which business travel (GHG category 6) [4]	1	1	0	0
of which employee commuting (GHG category 7) [4]	6	6	0	0
of which use of sold products (GHG category 11) [2]	1,887	2,043	– 156	– 8
of which end-of-life treatment of sold products (GHG category 12) [4]	1	1	0	0
of which downstream leased assets (GHG category 13) [4]	2	2	0	0
Net CO_2 savings	978	1,002	– 24	– 2
For information: indirect emissions from gas grid use by third-party sales operations [4, 9]	620	525	+ 95	+ 18
For information: climate-neutral biogenic emissions	1,706	1,721	– 15	– 1

1 We refer to industry-typical factors from GEMIS/Öko-Institut for fuel-related emissions, the emissions factors issued by the Federal Environment Agency (UBA) for electricity and the certified emissions factors of the respective locations for district heat.

2 Previous year's figure adjusted

3 Emissions from gas motor combustion

4 Reported for the first time; data in some cases refer to calendar years and are in some cases not collected each year.

5 Inspection work performed on an older plant enabled leakages to be remedied, significantly reducing SF_6 emissions.

6 Including RDF plants

7 Indirect Scope 2 emissions (location-based) cover the Mannheim, Kiel and Offenbach locations and are recorded on a calendar year basis.

8 GHG Protocol methodology used: spend-based and average data method

9 Due to its SBTi certification, MVV is required to publish regular reports. This involves natural gas volumes channelled by other energy companies through our gas grids.

Renewable energies and energy transition

Renewable energies

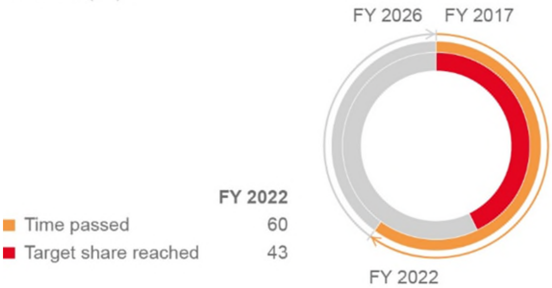
Active contribution to achieving climate protection targets

At least 80 % of electricity generation in Germany should be based on renewable energies by 2030. It should be based almost entirely on renewable energies by 2035 at the latest. These have a crucial role to play in meeting national climate protection targets. This situation harbours growth potential for our company; not least because of this, renewable energies are a key focus of our strategic alignment. By expanding renewable energies, we are also making a measurable contribution towards achieving climate protection targets on behalf of society as a whole. In this area as well, we set two specific sustainability targets in 2016 already and intend to reach these by the end of the 2026 financial year.

We will double our proprietary electricity generation from renewable energies between 2016 and 2026.

To make it possible for us to meet our target of doubling our electricity generation capacities from renewable energies from 400 MW to more than 800 MW, we are consistently investing in expanding our proprietary renewable energies generation portfolio. Our key focus here is on onshore wind turbines and increasingly on photovoltaics as well.

RENEWABLE ENERGIES
ELECTRICITY GENERATION CAPACITY
Shares (%)



Our green generation portfolio

In the 2022 financial year, we made further progress on the way to reaching our target. Including our shareholdings recognised at equity, our electricity generation capacity from renewable energies stood at 614 MW at the end of the 2022 financial year, 50 MW higher than one year earlier. This growth was mainly driven by the expansion in our wind power and photovoltaics portfolio.

At the end of the 2022 financial year, electricity generation at renewable energies plants (including biomass/biogas plants and EfW/RDF) accounted for 47 % of our total electricity generation capacity (previous year: 45 %). Should Grosskraftwerk Mannheim decide to deploy Block 7, currently in the grid reserve, in the electricity market on a temporary basis again in order to uphold supply reliability, then the share of installed capacities attributable to conventional generation may rise from the 2023 financial year for the period in which the block is deployed.

Electricity generation capacity
Fully consolidated companies and companies recognised at equity

MW_e	**FY 2022**	FY 2021	+/– change	% change
Biomass and biogas plants [1]	121	117	+ 4	+ 3
EfW [2]	176	176	0	0
Wind power	290	265	+ 25	+ 9
Photovoltaics	25	4	+ 21	>+ 100
Hydroelectricity	2	2	0	0
Renewables and EfW	**614**	**564**	**+ 50**	**+ 9**
Conventional CHP and other	703	702	+ 1	0
Total	**1,317**	**1,266**	**+ 51**	**+ 4**

1 Including biomethane plants
2 Including RDF plants

The generation capacity of our biomethane plants stood at 34 MW at the end of the 2022 financial year (previous year: 30 MW). The increase is due to our new plant in Bernburg. The biomethane produced at our plants in an environmentally compatible manner is one of the most versatile green fuels. It can be used both to generate electricity and heat and as a fuel for vehicles. In the medium term, we plan to further expand our biomethane generation capacities from waste digestion.

At the end of the financial year, green heat accounted for a 21 % share of our total heat generation capacities (previous year: 19 %).

Heat generation capacity
Fully consolidated companies and companies recognised at equity

MW_t	**FY 2022**	FY 2021	+/– change	% change
Biomass and biogas plants	99	34	+ 65	>+ 100
EfW [1]	762	759	+ 3	0
Green heat capacity	**861**	**793**	**+ 68**	**+ 9**
Conventional CHP and other	3,150	3,292	– 142	– 4
Total	**4,011**	**4,085**	**– 74**	**– 2**

1 Including RDF plants

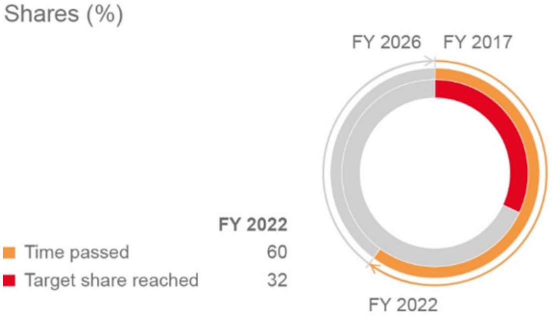
Project development business

We have all-round expertise in developing, building and launching operations with renewable energies plants. We aim to reach the projecting target in particular by installing onshore wind turbines and photovoltaics systems both in Germany and abroad. Smaller contributions will be made by biomass and photovoltaics systems at customer locations.

We will connect 10,000 MW of renewable energies to the grid between 2016 and 2026.

COMPLETED DEVELOPMENT OF NEW RENEWABLE ENERGIES PLANTS

Shares (%)



Since the beginning of the 2017 financial year, we have connected renewable energies plants with capacities of 3,229 MW to the grid. In the 2022 financial year, we added new capacities of 476 MW.

Completed development of new renewable energies plants

MW_e	FY 2022	FY 2021	+/– change	% change
Wind power	58	92	– 34	– 37
Photovoltaics	418	518	– 100	– 19
Total	**476**	**610**	**– 134**	**– 22**

Project development business strengthened in 2022 financial year

We merged our subsidiaries Juwi O & M and Windwärts into Juwi in the year under report and redesigned this company's market and brand presence. With Juwi, we offer end-to-end project development and services for planning, building and managing operations at onshore wind turbines and ground-mounted photovoltaics plants, as well as for hybrid projects, i.e. systems combined with battery storage facilities. Moreover, we also strengthened our project development business for photovoltaics in the B2B segment by taking over Avantag in the 2022 financial year.

The project development business is inherently volatile, both in Germany and in our international markets. The volume of new renewable energies plants at which operations are launched each year depends, among other factors, on social and political acceptance, the length of approval processes, regulations governing subsidies for renewable energies and specific implementation dates for individual projects. The volume can therefore vary widely from year to year. Moreover, changes in underlying conditions, such as those due to the coronavirus pandemic or changes in national subsidy mechanisms for renewable energies, may have a notable impact on the implementation of projects.

Operations management for renewable energies plants

MW_e	FY 2022	FY 2021	+/– change	% change
Wind power	1,261	1,282	– 21	– 2
Photovoltaics	2,518	2,529	– 11	0
Total	**3,779**	**3,811**	**– 32**	**– 1**

Supply reliability

Energy companies play a key role in the energy system transformation by investing in the energy infrastructure to prepare this for the energy transition and make it fit for the future. At the same time, they perform what is for society the important task of ensuring that the supply of electricity, gas, heat and water remains reliable and stable. The advancing energy transition raises new questions, as the volume of electricity fed in from wind turbines or photovoltaics systems fluctuates in line with weather conditions and the time of day. As an energy company and distribution grid operator, we ensure that we at all times provide our customers with a secure and reliable supply of energy. That makes it necessary at first to smartly combine renewable energies with highly efficient, flexible and controllable power plants.

Supply reliability became even more important as a topic in the year under report due to the implications of the war in Ukraine. With regard to our district heat supply, we continue to plan for a very high level of supply reliability. The so-called N-2 security level means that the district heat supply must still be secure if the two largest generation units suffer downtime at the same time, whether due to technical problems, damage or temporary fuel shortage. For this reason, we are building two backup plants at the Mannheim location to safeguard a seamless transition between the decommissioning of coal-fired blocks at our at-equity shareholding Grosskraftwerk Mannheim and the launch of operations with green heat generation. Ideally, these plants will be ready for deployment in the 2023/24 heating period already.

The reliability, smartness and performance capacity of our grids also have a key role to play in this respect. That is why we continually invest in maintaining, expanding and optimising our grids and plants and thus help to maintain supply reliability. At the same time, when it comes to the gas supply it is not only grid availability that counts, but also the availability of natural gas. Should any gas shortage arise, the German Energy Security Act (EnSiG) stipulates that the Federal Network Agency (BNetzA) would then ration gas volumes. This may result in MVV being obliged to limit the gas supply to the customers or customer groups named by the Federal Network Agency. In this case, MVV would not be able to exercise any discretion of its own. We are therefore in close contact with our natural gas customers and keep them proactively informed at an early date about current and foreseeable developments.

Furthermore, we have invited all residents of Mannheim to take part in MVV's gas bonus programme. MVV customers and non-customers in Mannheim have the chance to receive a financial bonus paid by MVV to reward proven gas savings. This is helpful in two ways: We are easing the financial strain on residents while also helping to avoid the risk of a gas shortage by reducing natural gas consumption.

Generation portfolio

Gradual conversion of our generation portfolio progressing

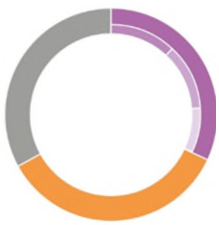
To shape the energy system transformation along social, ecological and economic lines, we are working to an increasing extent with renewable and to a decreasing extent with conventional energies and relying here on a variety of energy sources and technologies. The doubling of our proprietary electricity generation from renewable energies, a target we set ourselves to achieve by 2026, will change our generation portfolio, which will become even more diversified. This kind of generation portfolio helps us to ensure a secure energy supply for our customers. That is particularly true for the supply of heat to those retail, business and industrial customers connected to our district heat and industrial steam grids in Mannheim, Offenbach and Kiel.

At the end of the 2022 financial year, the electricity generated at renewable energies plants (including biomass/biogas and the biogenic share of waste/refuse-derived fuels) accounted for a 32 % share of our total electricity generation (previous year: 32 %).

ELECTRICITY GENERATION

Shares (%)

	FY 2022
Electricity from renewable energies [1]	32
Electricity from biomass and biogas plants	12
Electricity from wind power	12
Electricity from biogenic energy from waste [2]	8
Electricity from CHP	35
Other electricity generation	33



1 Due to their immaterial shares, electricity generation volumes from hydroelectricity and photovoltaics have not been presented in this overview.

2 Including RDF plants

Electricity generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2022	FY 2021	+/– change	% change
Biomass and biogas plants	492	522	– 30	– 6
Biogenic share of EfW [1]	306	268	+ 38	+ 14
Wind power	480	421	+ 59	+ 14
Hydroelectricity	5	3	+ 2	+ 67
Photovoltaics	12	3	+ 9	+ 300
	1,295	**1,217**	**+ 78**	**+ 6**
Electricity from CHP	1,438	1,594	– 156	– 10
Other electricity generation [2]	1,345	1,030	+ 315	+ 31
Total	**4,078**	**3,841**	**+ 237**	**+ 6**

1 Including RDF plants
2 Previous year's figure adjusted

The reduction in electricity generation volumes at our biomass and biogas plants is due above all to our Mannheim biomass plant in particular generating lower electricity volumes in order to generate higher heat volumes. The increase in generation volumes at our energy from waste plants is chiefly due to the launch of full-scale operations with Line 3 at our new energy from waste plant in Dundee/Scotland in the 2022 financial year. The higher generation volumes from wind power and photovoltaics result from additions to our portfolio. The reduction in generation from combined heat and power (CHP) is due above all to a lower volume of electricity generated at our gas-fired CHP plant in Kiel.

Heat generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2022	FY 2021	+/– change	% change
Biomass and Biogas plants [1]	147	97	+ 50	+ 52
EfW [2]	2,515	2,464	+ 51	+ 2
Green heat generation	**2,662**	**2,561**	**+ 101**	**+ 4**
Other heat generation	4,121	4,466	– 345	– 8
Total	**6,783**	**7,027**	**– 244**	**– 3**

1 Previous year's figure adjusted
2 Including RDF plants

At the end of the 2022 financial year, green heat generation accounted for a 39 % share of our total heat generation volumes (previous year: 36 %). Particularly at our biomass plant in Mannheim, we generated higher heat volumes at the expense of lower electricity volumes. Our energy from waste plants in Gersthofen and Leuna also generated more heat.

Biomethane generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2022	FY 2021	+/– change	% change
Biomethane generation	288	269	+ 19	+ 7

The increase in biomethane generation volumes was due to higher throughput compared with the previous year, as well as to our new plant in Bernburg.

Grid stability

Upholding grid stability even with growing loads
One way to assess the reliability of the energy supply involves measuring the frequency and duration of grid downtime. Our three large grid companies MVV Netze, Energienetze Offenbach and SWKiel Netz have set themselves the goal of ensuring a secure supply free of interruptions and thus to avoid grid downtime and remedy any downtime as quickly as possible. One key task for our grid companies is to work on further developing and operating our grid infrastructure. They therefore invest large sums in maintenance and modernisation measures. In the 2022 financial year, we invested Euro 126 million in maintaining and expanding our grids.

One key non-financial performance indicator which shows the security of the energy supply is the system average interruption duration index (SAIDI), which presents the average interruption to the supply in minutes per year and customer. The SAIDI figure only accounts for unplanned downtimes lasting longer than three minutes and not due to force majeure.

We aim to minimise any interruption-induced failure in the supply.

The management teams at our grid companies are kept regularly informed about interruptions and also discuss this information with the Executive Board. Any countermeasures thereby required are factored into our investment and maintenance projects.

We were able to maintain the cumulative SAIDI figure for our grid regions in the 2021 calendar year at almost the previous year's level. We provided our customers with an electricity supply that was largely free of interruptions and once again ahead of the national average.

Electricity supply interruptions (SAIDI)

Minutes/year	**2021** [1]	2020 [1]	+/– change	% change
Electricity at MVV	10	9	+ 1	+ 14
Electricity in Germany [2]	13	11	+ 2	+ 15

1 Calendar year

2 Source: Federal Network Agency (BNetzA)

Resource efficiency

Due to population growth and increasing prosperity, the volume of resources we consume has risen more than ten times in just over a century. Less than half of our current volume of resource consumption would be just about sustainable. The consequences of this situation are apparent in much-discussed issues such as biodiversity, resource scarcity or emissions of pollutants. Climate change offers the most striking example of these effects.

We use natural resources to generate energy. Our conventional generation plants also use finite resources such as natural gas and hard coal as fuels. We accord great importance to very high resource efficiency. One key indicator of efficient use involves the highest fuel efficiency rates resulting from optimised use of the energy contained in the fuel. This means that we minimise the energy losses arising when the fuels are converted into end energy, such as electricity or heat. It also means that we consistently invest in enhancing the energy efficiency of our generation plants and expanding green heat in conjunction with highly efficient combined heat and power generation. Where technically possible, we are increasingly relying on recycled products and input materials.

We further significantly stepped up our efforts to save energy in our own business operations in the 2022 financial year. We identified and implemented additional savings potential, not least in view of the energy savings required in winter 2022/23 to safeguard supply reliability in Germany. Measures here include significantly lowering temperatures at our office building to 19 degrees Celsius and reducing and in some cases completely avoiding the use of electricity applications. At our Mannheim location, for example, this is also apparent to the local population due to a marked reduction in night-time lighting and the fact we now only make sporadic use of the LED walls on our head office building that can otherwise be seen from a great distance.

Energy and resource use at MVV

Fuel efficiency rate documents high level of generation efficiency

The fuel efficiency rate key figure shows the efficiency of generation by presenting the volume of end energy generated (electricity and heat) as a ratio of the energy input (primary energy). If the fuel efficiency rate increases, the generation portfolio has a higher yield. By continually increasing the fuel efficiency rates of our plants, we reduce the volume of fuels used and cut emissions. In the year under report, our plants had an average fuel efficiency rate of 66 %. Our energy yield is thus ahead of the German average for generation activities. The Working Group on Energy Balances (AG Energiebilanzen) published an average fuel efficiency rate of 51.9 % for electricity generation at German power plants in 2021.

We operate our major generation plants almost exclusively with highly efficient combined heat and power (CHP) generation. After all, the fuel efficiency rate for CHP is significantly higher than when electricity and heat are generated separately.

The volume of fuel used in individual financial years largely depends on developments in weather conditions and market prices, as well as on the properties of the fuel in question. In the year under report, the geopolitical situation also had a significant impact. By-products, primarily ash and slag, arise in our energy from waste and CHP plants. The relevant data can be found in the section Local Environmental Protection. The volume of this ash and slag is determined by technical factors or by the fuels used and does not lie within our control. Wherever technologically possible and economically viable, we put these by-products to further use. After suitable treatment, they are returned to the economic cycle, for example as products for the construction industry.

Fuels and waste used at power plants and energy from waste plants
Fully consolidated companies and companies recognised at equity

	FY 2022	FY 2021	+/– change	% change
Biomass (tonnes 000s)	559	566	– 7	– 1
Waste/RDF (tonnes 000s)	2,018	2,014	+ 4	0
Natural gas (kWh million)	2,954	3,501	– 547	– 16
Hard coal (tonnes 000s)	806	688	+ 118	+ 17
Other fossil fuels (kWh million)	354	307	+ 47	+ 15

Average fuel efficiency rate
Fully consolidated companies and companies recognised at equity

%	**FY 2022**	FY 2021	+/– change	% change
Average fuel efficiency rate	66	67	– 1	– 1

Low volume of coal use
With the revision to the German Federal Climate Protection Act (KSG) that came into effect at the end of August 2021, lawmakers have on federal level taken due account both of European climate targets and of the ruling adopted by the Federal Constitutional Court with regard to climate justice (ruling of the First Senate dated 24 March 2021). The centrepiece of the legislation involves the obligation to reduce greenhouse gas emissions in Germany by at least 65 % by 2030. For the energy industry, this target means that it will only be permitted to emit a maximum of 108 million tonnes of CO_{2eq} in 2030, a reduction of 57 % compared with 2019. This reduction can only be achieved if coal-based generation is largely discontinued.

With its capacity of 60 MW_e, the power plant in Offenbach is the only hard coal-fired power plant in our conventional generation portfolio in Germany. Due to the lead time needed to build new low-CO_2 heat generation capacity, we expect this plant to be decommissioned in a few years.

In the Czech Republic, we operate several small coal-based plants to generate and secure the heat supply.

We are a minority shareholder in Grosskraftwerk Mannheim AG (GKM), with a 28 % stake, and do not operate this plant ourselves. GKM still operates three hard-coal fired CHP blocks. Block 9 at GKM is one of the newest and most efficient hard coal-fired power plants in Germany. In its Coalition Agreement signed in 2021, the Federal Government agreed that Germany would “ideally” exit from coal-based energy generation by 2030. To achieve this, it will be necessary to streamline the relevant legislative procedures and bring forward the decommissioning of coal-based power plants either with market-based measures or on the basis of regulatory requirements. In this respect, we are basing our plans and measures on coal-based electricity generation being brought to an end by the end of the 2020s. The setting of specific decommissioning dates for individual power plant blocks is subject to the proviso of supply reliability, as well as to the legal framework and the agreements reached with GKM and its shareholders. The speed at which substitute green technologies and backup capacities for district heat generation become available also plays a role in this respect. The coal exit legislation does not stipulate the precise modalities and dates for the decommissioning process.

Further decarbonisation of heat generation
The Federal Government aims to promote investments in renewable generation capacities. For the heat segment, it envisages a 50 % share of climate-neutral heat by 2030.

Due to the war in Ukraine, the transition from natural gas to green heat sources is to be promoted in particular in the years ahead. From 2024, for example, every newly installed heating system must be at least 65 % operated with renewable energies. At the same time, district heat systems are to be converted even more quickly to green heat, particularly in large built-up areas, thus offering an alternative to gas-fired heating systems. Additional subsidy incentives are to be provided to promote this.

Whereas numerous district heat operators have chiefly relied on gas-based systems in recent years, MVV announced many years ago that it would skip this interim stage and convert heat generation for the district heat grid in Mannheim and parts of the Rhine-Neckar region directly to green heat sources. Energieversorgung Offenbach is also pressing ahead with comparable plans adapted to local conditions.

To decarbonise the district heat supply, we are compiling various concepts which account for all significant forward-looking technologies. We took the first major step for the Mannheim location in 2020 by connecting our waste-fired CHP plant in Mannheim to the regional district heat grid. This means that up to 30 % of annual district heat volumes for Mannheim and the region are now already generated on a CO_2-neutral basis.

The next specific steps we will take to decarbonise district heat in Mannheim and the region are:

- GKM is building a first river heat pump on our behalf. With heat generation capacity of 20 MW_t, we will be able to draw on the environmental heat in the Rhine from the coming heating period.
- We will launch operations with a plant to recycle phosphorous from sewage sludge in 2023.
- We will launch operations with the backup plants currently being built in 2024 at the latest. This way, we will meet the technical prerequisite for decommissioning Block 8 at GKM.
- We are extending our biomass power plant (waste timber) to include a heat extraction facility. With a future heat extraction capacity of 45 MW_t, this CHP plant will make a major contribution to the district heat supply in regular operations from 2024 onwards.
- We are gradually tapping the potential for industrial waste heat at the plants at our energy park.
- We will access regional potential for deep geothermal energy. With GeoHardt, a joint venture with EnBW, we are investigating up to three preferred areas for geothermal energy plants to the south of Mannheim. Moreover, we have signed a cooperation agreement with Vulcan Energy for the medium-term supply of geothermal heat.

Intensive preparations are currently underway for further options. Examples include solutions such as further river heat pumps, the use of biomass, biomethane CHP plants and the use of further industrial waste heat potential. We are also working on green heat concepts at MVV's other locations with heat activities.

Increased water use required

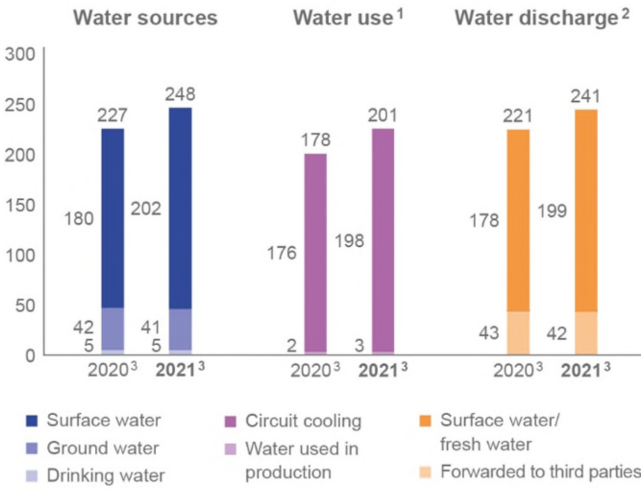
On a global basis, the availability of clean fresh water and drinking water is an increasingly important topic, partly as a result of climate change and partly due to the increasing overuse of groundwater and surface water. Our subsidiaries MVV Netze and Stadtwerke Kiel play an active role in protecting ground water and water surfaces. As they are responsible for the supply of drinking water in their regions, their supply systems have to be regularly analysed and checked. Here, the production, treatment and distribution of drinking water are not only of economic significance; the public supply mandate serves the common good. As a crucial source of life, drinking water is governed by strict quality standards. The most important objective for the water supply is to comply with these quality standards and minimise relevant contents. We have formulated the targets for our drinking water supply in detail in our Water Policy **mvv.de/water-policy.** MVV's water balance sheet clearly shows that the majority of our water use relates not the production of drinking water, but rather to circuit cooling at power plants. Here, we and our at-equity shareholdings chiefly take water from rivers and channel it back following cooling.

We are pursuing the objective of systematically reducing our ecological footprint on the level of water use as well. We intend to back up this objective with more far-reaching activities and will perform suitable detailed analysis and specify measures in the next two years. The growth in our water footprint in the 2021 calendar year was due to increased conventional energy generation within our portfolio. We expect conventional generation to decrease significantly in the medium to long term, thus also reducing the corresponding need for cooling water.

WATER VOLUMES

Fully consolidated and at-equity companies

m^3 million



1 Due to the low shares involved, closed-circuit cooling has been omitted from this overview.
2 Due to the low shares involved, water discharged to sewage plants has been omitted from this overview.
3 Calendar year

Local environmental protection

Local environmental protection is a further fixed component of our management systems, into which quality and compliance aspects are also integrated. For us, environmental protection on both national and local levels is closely based on legal requirements. The approvals granted and legal requirements form the basis for our activities, and that both when we build or modernise plants and in our day-to-day operations. Compliance, particularly with the prescribed threshold values, is monitored by the relevant authorities. Certain aspects of our operations, such as plant-specific emissions at large combustion plants, are subject to reporting requirements. Our subsidiaries and shareholdings are responsible for the operative management of environmental concerns on a decentralised basis. As they use different technologies and our stakeholders in the regions have different concerns, these companies set their own relevant focuses within the framework provided by our groupwide guidelines. Given the very tense current situation on the energy market and in global supply chains, there is an increasing risk of temporary shortages of specific chemical additives and input materials, such as ammoniac. This in turn could result either in threshold values for emissions being temporarily exceeded or in energy generation have to be curtailed. By working with forward-looking procurement, MVV is attempting to reduce the risk of this situation arising.

We work with decentralised environmental and energy management systems for the control and operative implementation of environmental protection measures. Where possible, we avoid other harmful environmental effects resulting from the generation and provision of our products and services or reduce these to a minimum. We pay attention, for example, to reducing other air pollutants. We treat the pollutants incurred very carefully. In the interests of a circular economy, unavoidable waste from energy generation and waste incineration, such as ash, metals and slag – so-called by-products – is turned wherever possible into products for other companies. Where this is not possible, the waste is disposed of correctly.

We are making a crucial contribution towards a sustainable circular economy with the ecological disposal of municipal sewage sludge. At our Offenbach location, we have since 2021 used a single-purpose sewage sludge incineration plant with an annual volume of 80,000 tonnes of sewage sludge. At our Mannheim location, a sewage sludge treatment plant with capacity for up to 180,000 tonnes of sewage sludge a year is currently being built. In future, this will be able to recover phosphorous on location for use in fertiliser production.

At our conventional power plants, we generate electricity and heat by using fossil fuels, here especially natural gas and hard coal, as well as regenerative fuels. The latter fuels include both solid biomass and refuse-derived fuels (RDF), which are produced from waste and have a biogenic share of around one half.

Other emissions and by-products
Fully consolidated companies and companies recognised at equity

Tonnes	**2021** [1]	2020 [1]	+/– change	% change
NO_x	2,970	2,924	+ 46	+ 2
SO_2	971	885	+ 86	+ 10
Dust	28	18	+ 10	+ 56
Fly ash	94,039	90,470	+ 3,569	+ 4
Ash and slag	528,235	529,882	– 1,647	0

1 Calendar year

Further environmental protection aspects form part of the environmental management systems at our subsidiaries and shareholdings.

Biodiversity

The environmental topic of biodiversity is increasingly important for MVV. On an international level, it is discussed at the regular UN Biodiversity Conference. New global biodiversity targets are expected to be agreed at the next COP15 Conference in December 2022. The background to this is the increasing rate of species extinction, with climate change putting pressure on ecosystems in Europe as well. In the World Risk Report of the World Economic Forum, the loss of biodiversity is already ranked as the third-largest long-term economic risk, as the destruction of natural capital and reduction in diversity of species harbours the risk of irreversible consequences for the environment, humanity and thus economic activity. In view of this, the EU has already included the topic of biodiversity as one of its five strategic environmental objectives. The goal here is to achieve conservation status for all species and types of habitat in the EU by 2050 and no longer to cause any loss of biodiversity outside the EU. This has already resulted in specific legal requirements in companies, such as the obligation to integrate biodiversity as a focus topic in the EU Taxonomy for sustainable investments and in future reporting obligations required by the Corporate Sustainability Reporting Directive (CSRD). In connection with these requirements, we too will report in more detail about our strategy and measures to uphold biodiversity.

MVV directly touches upon biodiversity when it builds new or upgrades existing energy infrastructure. When we build new renewable energies plants, for example, we commission surveys to investigate the location-specific impact on flora, water and fauna, including birds, bats and rodents. Environmental impact assessments evaluate potential negative impacts, impose restrictions or call for offsetting measures. This can create tensions between local animal protection, regional species conservation and climate protection measures. To date, these have to be resolved on individual case level. With a view to accelerating the expansion of renewable energies, the Federal Government intends, within certain limits, to grant renewable energies priority over species conservation concerns.

However, biodiversity is also relevant to MVV in areas other than infrastructure projects. We use various types of biomass to generate energy, whether these be biogenic non-recyclable waste, regenerative resources, landscaping material or waste timber. We are aware that the use of fresh wood to generate energy, for example, is not only questionable from a climate protection perspective but may also impact negatively on forests. In view of this, we attach value both to sustainable forestry and to avoiding the use of fresh wood to generate energy. The waste timber we dispose of at our plant in pollutant categories III and IV includes contaminated timber, such as railway sleepers that would otherwise introduce pollutants and hazardous substances into the natural world.

Sustainable circular economy

A sustainable circular economy focuses on closing materials cycles and making effective use of waste, either by returning it to the economic cycle as a secondary raw material or by generating energy. This means that, even when it has been correctly separated, household and commercial waste is by no means “rubbish”. We make effective use of this valuable commodity in order to protect natural resources.

At MVV, the circular economy mainly plays a major role in the environmental energy business field and here in particular in treating waste at the end of the waste hierarchy. However, in our business customer and strategic investments business fields we also make major contributions to saving resources and the circular economy.

Our targets and measures for further developing these business fields therefore directly help to promote a sustainable circular economy. We will review and, where applicable, hone our strategy for and management of the circular economy in connection with the future requirements of the Corporate Sustainability Reporting Directive (CSRD).

Using the materials and energy contained in waste makes a major contribution towards reaching the target of building an economy that is as circular as possible. The best solution should always be to design products in such a way that they can remain in the cycle on a permanent basis, for example due to recycling, and do not become non-recyclable waste. That is also the aim of the long-term political targets set out, for example in the Green Deal of the European Commission. Until that aim is achievable in terms of the underlying technology and regulation, and in cases where it is not possible, the next-best solution is to use unavoidable waste to generate energy. If it were possible to enhance global production in the long term in such a way that all waste incurred is free of fossil fuels, then the energy generated at energy from waste plants would be fully regenerative.

Treating the waste in strictly controlled conditions at an energy from waste plant offers threefold benefits. Firstly, the waste is sanitised, meaning that materials harmful to people’s health or the environment are destroyed. Secondly, the energy contained in the waste is used to produce steam for industry, heat for businesses and households and electricity. Put simply, households deliver their non-recyclable waste to MVV and in return receive energy in the form of heat and electricity. Around 50 % of the energy generated is renewable, as around half of the waste is of biogenic origin. Thirdly, incineration in this way makes an active contribution to climate protection. The alternative – landfilling – would lead to the emission of large volumes of methane, which is harmful to the climate. Thermal treatment of the waste avoids this.

We operate a total of eight energy from waste plants in Germany, the UK and the Czech Republic. At these plants, we incinerated around 2.4 million tonnes of non-recyclable waste and refuse-derived fuels in the 2022 financial year. At our Energieversorgung Offenbach subsidiary, we have since 2021 used a sewage sludge incineration plant in order to treat municipal sewage. A further plant where we will simultaneously recover phosphorous is currently being built at our Mannheim location. Phosphorous is used as a valuable resource in fertiliser production. In Bernburg, Saxony-Anhalt, we provided a further example of a modern and sustainable circular economy in the year under report. Here, we connected our second bio-waste anaerobic digestion and energy generation plant to the regional gas grid. Since then, the bio-waste delivered to the plant has been treated on location and the resultant biomethane fed into the grid.

Employee concerns aspect

As an energy company with regional roots, we are part of society at the locations and in the regions in which we operate. In view of this, our goal is to make positive contributions for our employees and for local populations.

We offer attractive and secure jobs to our employees, who now number more than 6,500, in an environment in which everyone can make his or her contribution to promoting decarbonisation and upholding supply reliability. That is also a great responsibility, one that we are aware of and factor into our strategic decisions.

The ongoing coronavirus pandemic has presented us with particular challenges since the 2020 financial year. Working together, however, the Executive Board, managers, employees and employee representatives have managed these challenges successfully. The decisions we have taken to handle the crisis have enabled us to live the values underpinning our corporate culture – Community, Responsibility, Appreciation and Courage – in our daily work. To protect our employees and safeguard operating processes, we have agreed rules based on the respective status of the pandemic and implemented solutions. We amended our forms of working together, communicating with each other and entering into dialogue in line with requirements. We have noticed that these changes have influenced our activities, management and communication. We are monitoring these developments and will draw on the positive aspects at MVV in future as well.

Employer attractiveness

Our employees are our future

Motivated, healthy and well-qualified employees are crucial to MVV's success. Viewed in the long term, demographic trends and changes in the population structure will create additional challenges if we wish to attract and retain suitable employees in future as well.

This being so, in our personnel strategy we are focusing on the following areas:

- Leadership: We are continually and systematically improving the quality of management at the company and adapting this in line with changing market and employee requirements.
- Demographics, work-life balance, remuneration management: We aim to remain an attractive employer. That is why we offer attractive remuneration packages and are committed to helping our employees combine their work with family or nursing care commitments. In our recruitment, we particularly focus on expanding diversity at the company and especially on equal opportunities for women.
- Work organisation: We are making continuing efforts to further develop our company and corporate culture and aim to retain and enhance our employees' skills. To this end, we invest in training our workforce and enhancing its willingness to embrace change. After all, we need highly trained, flexible and innovative specialists and managers who are keen to make their contribution to the new energy system. We are actively shaping our company for the future. Mobile work, for example, has become a fixed component of our work organisation.
- Talent management: We deliberately identify, support and cultivate upcoming talent – within the company from among our trainees and new recruits through to employees who have the potential to take on management positions, and externally with strong personnel recruitment efforts on the market.

MVV is strengthening the company's forward-looking development with an approach to diversity management that is in line with the times: "Energy for Diversity". This is because we see diversity as a foundation for success. The programme is based on the three pillars: promoting women, work and family, and demographic management.

With our broad range of training options, we also offer young people a wide variety of vocational opportunities at the company. We also upheld our high training rates during the coronavirus pandemic.

The Executive Board Personnel Director is responsible for all personnel-related activities. Reporting on relevant personnel topics is provided to the full Executive Board on a regular basis and whenever necessary due to individual events or topics. The specific structure and implementation of the personnel strategy is organised on a decentralised basis. This way, targeted focuses can be set in line with circumstances on location.

MVV has a Group Works Council, as well as works council bodies and committees on the relevant levels. The company's management works together with these bodies on a basis of trust, meaning that both the company's concerns and those of its workforce are accounted for in all significant decisions. The Supervisory Board of MVV Energie AG **https://www.mvv.de/en/about-us/overview/corporate-structure/supervisory-board** includes equal numbers of shareholder and employee representatives. This means that employee concerns are also central to any important company decisions.

We aim to protect the physical and mental wellbeing of our own employees and of those who work on our behalf. To this end, we are making ongoing efforts to improve work safety at the Group. Consistent with this objective, we have established groupwide programmes to increase safety at work. These programmes are taken up by the work safety officers on a decentralised basis and then backed up and supplemented with suitable measures. The current status is reported on Group level and discussed by the Executive Board on a quarterly basis.

Key figures for year under report

Personnel figures (headcount) at balance sheet date

	30 Sep 2022	30 Sep 2021	+/– change	% change
MVV [1]	**6,556**	**6,470**	**+ 86**	**+ 1**
of which in Germany	5,552	5,520	+ 32	+ 1
of which abroad	1,004	950	+ 54	+ 6

1 Including 335 trainees (previous year: 340)

We employed a groupwide total of 6,556 individuals as of 30 September 2022. The growth in our workforce was due above all to higher employee totals in our growth fields.

Our international workforce includes 502 employees at our Czech subgroup, 305 at Juwi's shareholdings and 159 at the British subsidiaries of MVV Umwelt.

Training and development

Training with promising prospects for the future
In Mannheim alone, we offer the next generation of employees training in more than 16 different commercial and technical vocations, as well as combined training and study programmes. In Mannheim, Offenbach, Kiel and Gersthofen close to Augsburg, we are among the largest trainers in the respective regions.

Our broad range of training programmes aims to show young people the wide variety of career opportunities at our company.

As of 30 September 2022, a total of 335 women and men were in training at MVV. Since March 2020, our trainees in combined training and study programmes and our commercial trainees have mostly worked from home. This enabled us to maintain the high quality of training despite the restrictions resulting from the coronavirus pandemic. As a result, we were able to avoid any trainees leaving the company for this reason.

Targeted personnel development: training concept implemented
For us, targeted personnel development is a key factor which also determines our competitive success. We have therefore developed numerous measures and instruments based on the experience we have gained in the rapidly changing economic climate in which we operate.

In the 2022 financial year, we pressed consistently ahead with our training concept and offered numerous virtual seminars on various topics on all levels of the hierarchy. Our employees made intensive use of this training.

Our further training measures and a variety of knowledge platforms enable us to ensure a shared basis of knowledge on overriding strategic topics. Alongside in-house training on various topics, we also offer team development and individual measures, such as coaching and mentoring.

We aim to develop the potential of our employees.

Key focuses of our staff development measures in the 2022 financial year on the one hand included the launch of our General Management series intended to develop our management staff and on the other hand further expanding our IT training for all employees. We also launched an online platform for specialist journals.

In Mannheim, we work with a management review system to record the skills and further training needs of our managers and high-potential employees and to plan their next career steps. This involves a graded process including self-assessment, third-party assessment, internal management review conferences and concluding feedback talks between employees and managers. Individual development measures are implemented under the responsibility of specialist departments, while employees with management potential are developed within a well-established talent management process. Our understanding of talent also extends to specialist and upcoming staff, such as trainees and career starters.

MVV's specific competency model forms the basis for personnel-development meetings and individual support programmes for all employees. We also regularly hold appraisals and surveys at our main locations in Germany. This way, our employees have the opportunity to provide honest feedback and we can enhance the quality of management at our company.

"Energy for Diversity"

WOMEN AND MEN
Shares (%)

	FY 2022
Women	28
Men	72

Status: 30 September 2022

The Supervisory and Executive Boards of MVV Energie AG firmly believe that the company can generate sustainable business success only if responsibility is assigned to women and men on a basis of equality. Particularly in view of demographic change, it makes sense for both social and economic reasons to promote all talents regardless of their gender. Among others, this approach also has the benefit of proactively countering the effects of any shortage of specialist and management staff. To date women have only made up a comparatively low share of the overall workforce at companies operating in the energy sector. The Supervisory and Executive Boards of MVV Energie AG believe that increasing the share of women working at the group of companies on a long-term basis is one key to the company's successful further development.

By 30 September 2026, we aim to raise women's share of our workforce to 35 % and of our total management staff to 25 %.

We have therefore set ourselves the target of raising women's share of our Group's workforce to 35 % by 30 September 2026, up from 28 % at 30 September 2022. Among our management staff, we also aim to increase the share of women to 25 %; at the balance sheet date on 30 September 2022, this share stood at 16 %. To achieve our targets by 2026, we will consistently implement our promotional measures and programmes and further expand these in the years ahead. That is particularly true for our targeted personnel activities for women who have the potential to take on management positions.

We are supplementing existing activities to increase the share of women by implementing measures aimed at raising the visibility of women at MVV both within and outside the company. One key aspect is the establishment of "wom:energy", our groupwide network of women that holds regular networking meetings and organises its own formats. Moreover, we have also taken measures to increase the number of applications we receive from promising external and internal women candidates.

For MVV Energie AG, we report on the share of women in the first and second management tiers below the Executive Board. In September 2021, the Executive Board set targets for the share of women at 25 % for the first and 30 % for the second management tiers, with both targets to be reached by 30 September 2026. The share of women in the first management tier amounted to 18 % at 30 September 2022 and was thus ahead of the previous year (30 September 2021: 14 %). In the second management tier, the share of women amounted to 22 % (30 September 2021: 31 %) and thus fell short of the target level set. We see the share of women in the first management tier as offering an improved basis for meeting our target and will further step up our internal efforts to raise the share in the second management tier.

We promote equal opportunities for women
As well as raising awareness for all aspects of diversity, the key focus of the new central department, Diversity and Prevention, chiefly involves equal opportunities for women. To promote this objective, the department is developing and implementing measures in the areas of employer image, recruitment, personnel and cultural development. The new department is also planning campaigns and pursuing targets in close cooperation with specialist departments.

To reach our targets, we are drawing on a variety of promotional measures and programmes and expanding these further. To increase diversity at the company, we offer voluntary training to all managers. This addresses MVV's diversity standards, unconscious prejudice, judgemental habits and the handling of discrimination. We are promoting the exchange of information and experiences between employees with "Diversity Talk", our new format in which we look into a variety of topics. Furthermore, we attach great importance to offering targeted personnel development to women with suitable potential. One example is the individual support offered to women in mentoring schemes. In X-Company-Mentoring, a cross-company programme organised each year in cooperation with other well-known companies in the region, male and female mentors in the management tiers of participating companies pass on their skills and experience to talented women employees for a period of one year. This is intended to support employees in their own personal development, with a separate special focus on management. We supplement this with an internal mentoring programme in which women managers advise and support select experts and next-generation talent. Thanks to our corporate membership in "European Women's Management Development", an association for professional women, and "Spitzenfrauen BW", a regional project for women in Baden-Württemberg, we offer free membership for interested women employees. This way, they benefit, for example, from free contingents of places in presentations and seminars and from access to areas of knowledge specially tailored to women.

Work and family can be combined at MVV
Our aim is for our employees to be able to successfully combine their family and work commitments on an ongoing basis. Over their working lives, our employees pass through many different stages of life. We aim to support them in mastering the daily requirements of their work and private lives. To this end, we offer a variety of worktime models with flexible working hours. Digitalisation and the use of modern communications appliances also facilitate mobile work in line with specific needs.

To assist our employees in dealing with the challenges presented by the coronavirus pandemic, in cooperation with the Works Council we have significantly extended the regular working hours to facilitate a more flexible approach.

Our part-time management concept is intended to retain high-performing employees at the company through various stages of their lives. This concept is targeted on the one hand at management staff in specific situations, such as parental or nursing care leave. It is also intended to help employees to return to work more quickly after parental leave. On the other hand, the concept is intended to encourage employees to directly assume part-time management positions.

Since the 2021 financial year, we have offered a family service. Here, we work together with an experienced service provider who can offer strictly confidential advice to employees who face work-related, family or financial difficulties. This offer is initially restricted to around 2,000 employees mostly at the Mannheim location, as well as at other, smaller locations.

Another area in which our employees will have greater needs in future involves caring for relatives. We are supporting them here as well. Employees caring for relatives can be granted leave from work. We also inform our staff about care options by holding information events, providing emergency folders with information about work and care and, like at our subsidiary Energieversorgung Offenbach, for example, by cooperating with a nursing care service.

We are actively tackling demographic management
In our third pillar of "Energy for Diversity", we are addressing the demographic challenges we face. As well as offering extensive services to help employees maintain their health and further develop their personal skillset, we also make use of a modern knowledge transfer method for employees leaving the company. The knowledge they have acquired over many years should be retained at the company after their departure. We organise a well-structured and moderated transfer of knowledge and coordinate which knowledge should be transferred, as well as the timeframe and manner in which this should take place. In select departments in Mannheim, for example, we perform so-called "parallel runs", in which employees due to retire from the company help to train their new colleagues over an extended period of time.

Occupational health and safety

Lived Safety still a key focus
We accord the utmost priority to protecting the health and safety of our employees and those who work on our behalf.

The following points form the core of our “Lived Safety” programme:

- Every accident is one too many. Our goal is therefore clear: no accidents.
- For us, protecting the health and safety of our employees is not just a task, but rather an obligation.
- All employees are important to us and are involved in health and safety decisions.
- All managers and employees know their responsibilities and actively live up to these in the areas which they are able to influence.
- The aim is to continually improve the safety and health protection of all employees based on a prevention-driven approach.

It is about people
For “Lived Safety” to be effective, everyone has to make their own individual contribution. Based on clearly defined roles and equipped with corresponding skills, those involved in occupational safety are therefore the key pillars of our safety philosophy.

Our accident statistics and the prevention measures taken are evaluated on Executive Board and group level on a quarterly basis, with further measures also being discussed and planned. The work safety committees required by § 11 of the German Occupational Safety Act (ASiG) are formed by the companies on location and comprise both employer and employee representatives. The great importance our company attaches to work safety is also reflected in the fact that this is a fixed agenda item at the meetings of our Supervisory Board. We liaise closely with professional associations and employee representatives and agree our work safety and prevention strategies and measures with them.

Our aim is to prevent accidents from occurring at all.

Every accident is one too many
We are making continuous efforts to improve work safety at the Group and are clear that every accident is one too many. This is the only way we can help to ensure that safety is actually lived within our company and beyond.

Structured programmes and measures form a key foundation in this respect. Examples here include an electronic instruction system with occupational safety training tailored to the respective workplace, an inspection concept and regular safety briefings aimed at raising safety awareness and firmly establishing this on all levels.

In line with the German Industrial Safety Act (ArbSchG), we perform risk assessments in all areas of the company. This way, we identify any work-related hazards, assess associated risks and lay down suitable technical, organisational and personnel measures. Together with the safety specialists, managers compile the risk assessments and, where necessary, consult the company doctor and the Works Council. This cooperation enables us to ensure that we account for all relevant requirements and information.

In around 80 % of our domestic company departments, these risk assessments are performed and documented via a software tool. Here, we analyse the workplaces used, the activities performed, the work equipment used and any hazardous materials deployed. Where necessary, account is also taken of groups of persons who are at particular risk. Once we have implemented protective measures and conclusively checked their effectiveness, we reassess the remaining residual risk. Furthermore, implementation of various work safety ordinances is also factored into our analyses. We perform a review at least once a year to ascertain whether new findings or new legal or operating requirements mean that we have to amend the risk assessments.

All employees are called on to report any work-related risks and dangerous situations to their managers. If necessary, we can then add these to the risk assessment and lay down suitable measures. Persons who find themselves in a work situation where there is an acute risk of injury or sickness must stop work and immediately consult their managers. We have laid this down in corresponding instructions. We systematically investigate any accidents and near-accidents reported. Here too, we consider whether we have to make any amendments to our risk assessments.

In our instructions, we explain the interrelationships involved and lay down work safety requirements. We supplement personal training by offering work safety training using an electronic instruction system. This is based on the results of the risk assessment and is tailored to individual workplaces. This way, our employees can flexibly and individually address a variety of basic topics relating to work safety.

We evaluate accident statistics on a systematic basis for the overall Group. In this, we consider all accidents at or on the way to or from work, including more minor injuries. We only perform a statistical evaluation of accidents with particularly severe injuries and of accident types on an incident-related basis. The assessment and evaluation are performed on a gender-neutral basis and in line with data protection requirements. We also assess which further preventative measures might be expedient.

Accident statistics

	FY 2022	FY 2021	+/– change	% change
Lost time injury frequency rate (LTIF) [1, 2, 3, 4]	3.7	4.1	– 0.4	– 10
Fatal accidents	0	0	0	0

1 Includes all fully consolidated companies in Germany (new fully consolidated companies only included in accident statistics in second financial year after acquisition)
2 Calculation based on work-related accidents from first day of absence per 1,000,000 working hours
3 Basis for FTE figures:
FTE figures at reporting date on 30 September
Basis for non-centrally recorded FTE figures:
FTE figures received directly from companies at reporting date on 30 September
Working hours = number of FTEs (full-time equivalents) at reporting date on 30 September multiplied by 1,700 hours (≙ 1 FTE)
4 Changes of methodology in FY 2022:
Definition of accidents included: Influenceable LTI arising during working hours due to a work assignment.
Adjustment in companies included: only domestic fully consolidated companies.

With an LTIF of 3.7, we were able to reduce the frequency of accidents by a further 10 % compared with the previous year. We have thus achieved a reduction of around 45 % in the past two financial years. There were no accidents with fatal consequences in the year under report.

Health protection particularly important during pandemic

We aim to promote the health of our employees on a preventative basis and therefore support them with a variety of measures offered in our company health management. Alongside extensive offerings available at our company medical services, as well as numerous information, events and fitness formats provided online, we also offer further health promotion services to employees at our main locations.

In the year under report, company doctors at our major locations again offered coronavirus vaccinations to our employees. This way, we helped to raise the vaccination rate. Following the first and second vaccinations already provided in the previous year, in the year under report the company offered and actively advertised the booster vaccination for all employees.

Social concerns aspect

Corporate social responsibility

We have the responsibility to use our resources to promote the conversion in the energy system so as to provide a more sustainable and efficient energy supply and, to this end, to maintain an open dialogue with our stakeholders. Our dealings with local communities therefore form a further important aspect of our responsibility towards society. For many of the projects involved in expanding renewable energies and the necessary infrastructure, acceptance by people on location is absolutely crucial. We are therefore committed to planning and implementing projects together with local populations and their representatives on location, promoting acceptance for these projects on the basis of dialogue and reaching decisions that also convince third parties. We have a project-specific approach which is handled on a decentralised basis by our subsidiaries and shareholdings.

As a company with regional roots, we are an active part of society in the locations and regions in which we operate. We are aware of the important role we play in society. We assume responsibility for our decisions, actions, products and services, and that towards our customers and capital providers, as well as towards the environment and society in which we live. The value we create on site makes us a major economic factor at our locations. We invest, award contracts to local or regional businesses where possible, safeguard jobs, offer high-quality training and pay taxes and duties. It goes without saying that we do not use any questionable measures to avoid taxes or move profits across borders.

With our social commitment, we contribute to the common good in those regions in which we operate. The way we deal with and exchange information with all relevant groups within society shapes the relationship between us as a company and local populations. As a rule, our social commitment is project-based. Responsibility for these activities lies with the management of the respective companies.

Social commitment – we set regional focuses

The companies within our Group are committed to promoting the development in society and support local and regional projects, especially in the fields of social welfare, education, science, culture and sport. One key focus is on promoting upcoming talent and young people. In view of the coronavirus pandemic, our companies offered greater support to social welfare initiatives and projects again in the past year. Based on shared values, our companies are responsible for determining the structure and scope of their regional social commitment. Staff on location are familiar with local needs, have contacts to local organisations and facilities and set the priorities they would like to address and the projects they intend to support with their activities. In most cases, the support is financial, taking the form of donations. This means that we provide support for clearly defined countermeasures and with corresponding benefits.

We are committed to the social environment in which we operate.

At MVV Energie, the Sponsorship Fund is one key component of its regional commitment. This provides financial support to innovative and creative projects at clubs, organisations and institutions in Mannheim and the Rhine-Neckar metropolitan region. Moreover, in 2020 MVV Energie launched the MVV Green Sponsorship Fund, which supports clubs in installing photovoltaics systems. The Emergency Fund at MVV Energie, which helps private customers who through no fault of their own are in situations of need to cover the costs of their electricity, gas, district heat and water, has been in place for 15 years already. With our “Monnem spart Energie” (Mannheim saves energy) campaign, we are supporting private customers in making targeted energy savings and have made numerous tips available to assist in this. The company’s largest sponsorship partners in the Rhine-Neckar metropolitan region are the art gallery Kunsthalle Mannheim, which holds MVV Art Evenings with free entry every first Wednesday in the month, the technology museum Technoseum, the Adler Mannheim ice hockey team, the Reiterverein Mannheim riding club and TSG Hoffenheim football club. With its “Heart and Soul for Your Project!” sponsorship concept, Energieversorgung Offenbach supports regional clubs and organisations. Stadtwerke Kiel has partnered Camp 24/7, in which around 6,000 children and young people a year learn how to sail and the only project of its kind in Germany, since 2002 already.

In dialogue with our stakeholders
We are open to the concerns of all our stakeholder groups and seek ongoing dialogue with them. This makes it possible to assess a variety of perspectives and concerns more closely and to factor these into our company's activities.

We take regular talks and interviews with stakeholders as an opportunity to review our material sustainability topics. Together with MVV's specialist departments and subsidiaries, we assess the extent and form in which specific concerns can be accounted for. Our experts then discuss the findings and implement these in our sustainability programme.

We operate at various locations and in diverse business fields and therefore touch on the interests of numerous, often heterogeneous groups of stakeholders. Our shareholders, employees and customers are among our most important stakeholders, as are government and political representatives. Other major stakeholder groups include non-government organisations (NGOs), analysts, local residents at our locations, the media, associations and suppliers. Further stakeholders are cooperation partners, business partners and research institutes.

Our aim is to communicate transparently and openly with our stakeholders.

We attach great value to maintaining an open and transparent dialogue with our stakeholder groups, and that both in our one-to-one contacts and via our websites, in press releases, on social networks and in specialist formats, such as analysts' or press conferences. We take part in public discussions and other events, such as specialist energy industry conferences and public information events. We play an active role in the relevant bodies, associations and networks, participate in research projects and take part in the public debate and focus here on the energy system transformation.

Via our membership in industry associations, we participate in energy policy and energy industry discussions. We are members, for example, in the following associations relevant to the areas in which we operate: Bundesverband der Energie- und Wasserwirtschaft e.V. (BDEW), Verband kommunaler Unternehmen e.V. (VKU), Energieeffizienzverband für Wärme, Kälte und KWK e.V. (AGFW), VGBe, the international association for the generation and storage of electricity and heat, Bundesverband Neue Energiewirtschaft e.V. (BNE), Bundesverband WindEnergie e.V. (BWE), Bundesverband Geothermie, Bundesverband deutscher Wohnungs- und Immobilienunternehmen (GdW) and BAUM e.V. Not only that, our subsidiaries and shareholdings on location are involved in local initiatives and networks. Apart from membership fees and project contributions, we do not make payments to associations or other institutions. We occasionally finance studies and surveys on matters relating to the energy industry. These are published and our involvement is suitably indicated.

In many of the projects in which we promote the expansion of renewable energies, we see how important it is to involve people on location and gain their acceptance. In view of this, in the 2022 financial year we were again actively involved in planning and implementing projects together with local populations and their representatives on location. We prepare these dialogues carefully and actively work together to reach decisions with which we can also convince third parties. We perform these measures on a project-by-project basis.

Respect for human rights and combating corruption and bribery aspect

Responsibility for supply chain and human rights

We exercise influence on topics relating to sustainability along our upstream and downstream supply chains as well. In the upstream supply chain, for example, we can decide who we wish to do business with and which minimum requirements we place in our suppliers. Key factors influencing our supplier selection from a non-financial perspective include the topics of anticorruption measures, human rights, employee rights, including work safety, and environmental protection.

We aim to avoid any situation in which activities along our value chain have or favour any harmful effects in terms of human rights.

MVV's procurement

The energy industry supply chain is greatly influenced by fuel trading, which is handled on energy exchanges or in bilateral agreements. A significantly lower share of our total procurement volumes relates to suppliers who provide us with goods or perform services for us.

Key factor: commodities
The majority of our procurement volumes involve energy carriers such as electricity and natural gas. We typically hedge these by way of financial transactions but do not physically procure them. In recent years, there has been increasing public interest in the greenhouse gas emissions resulting from the production and transport of natural gas. This relates in particular to natural gas from Russia and LNG gas from overseas. The topic of energy security also became more important in the year under report. Due to the discontinuation of Russian gas supplies, Germany is obliged to draw on alternative sources of natural gas, including LNG gas in particular. Depending on the procurement source, this may give rise to new ecological issues, ranging from local environmental protection to increased CO_2 emissions in the upstream supply chain. MVV does not procure the natural gas volumes it needs from source countries itself, but rather depends on importers. We analyse the issues involved very closely but cannot directly influence these.

We occasionally receive enquires as to the origin of the hard coal used at power plants and whether we exert influence on production conditions at the coal mines. The only coal-fired plant we operate ourselves is the CHP plant in Offenbach. For this, we directly procured around 125 thousand tonnes of hard coal in the 2022 financial year. Until the outbreak of the war in Ukraine, most of this hard coal came from Russia. Since then, this fuel has mainly been procured from South Africa and Latin America. We do not have any direct contractual relationships to mine operators but, given the low volumes involved, procure the fuels via intermediaries. Not only that, our very low volume of demand means that we have hardly any possibility of exerting influence on location. Hard coal is also used at the power plant Grosskraftwerk Mannheim AG (GKM), where we are minority shareholders. Here, we have no direct influence on business activities and fuel procurement, as we ourselves are not the operators of the plant. We are nevertheless aware of our responsibility and show our commitment by, for example, raising sustainability topics with GKM and requesting information. GKM has been a member of the Better Coal Initiative since March 2021.

Low volume of non-commodities
Apart from commodity procurement our other procurement volumes are comparatively low, corresponding to only around one fifth of commodity procurement. They mostly involve procuring goods and highly qualified services from contract partners often known to us for many years. Based on separate analysis, we also address the major potential risks further upstream in our supply chain. To this end, we have established a cross-location team of experts which acts early to assess legal requirements, discusses developments in central procurement and implements measures to shape further developments. This team of experts includes procurement staff, legal experts, our Human Rights Officer and our sustainability management. In a process managed by this expert team, starting in the 2023 financial year our suppliers will be subject to an automated risk review that will compile individual sustainability risk profiles.

One relevant topic again in the past financial year involved potential human rights violations in the photovoltaics supply chain. Public reporting has drawn attention to potential forced labour in select Chinese provinces where most of the global production of silicon is located. This risk is not specific to photovoltaics supply chains but rather constitutes a cross-industry risk involved in trading with China. We have longstanding supply relationships with module manufacturers, particularly via our Juwi subsidiary. We are in close contact with our suppliers with regard to these topics, although we have yet to gain awareness of any specific violations within our supply chains. We have nevertheless also contractually agreed more far-reaching precautions with the suppliers. Irrespective of this, we are closely looking into which alternative procurement options may be available for photovoltaics modules in the medium term.

Procurement and business terms for suppliers

Our cooperation with suppliers and service providers in Germany and the European Union is based on applicable laws and regulations, including the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (LkSG), which will apply to us from 1 January 2023, as well as on those compliance regulations, forms of conduct and work practices relevant to us. Among others, these comprise the international conventions of the United Nations (UN), the International Labour Organization (ILO) and the Organisation for Economic Co-operation and Development (OECD), as well as the UN Global Compact. We agree with our suppliers that they will comply with our Compliance Code of Conduct and our Suppliers Code of Conduct, both of which are published on our website **www.mvv.de/zentraleinkauf.** Our suppliers undertake to comply with legal requirements and internationally recognised standards governing anti-corruption measures, the protection of human and workers' rights and environmental protection. If these obligations are breached, then contractual sanctions, including contractual penalties, termination and damages payments, are provided for. To implement the requirements of the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (LkSG), we initiated a groupwide project in which we introduced an AI-based risk analysis process in October 2022 and established supplier risk management connected to this. This will enable us to avoid, terminate or minimise any violations by our suppliers of human rights and/or human rights-related environmental protection requirements. The process already accounts for the requirements contained in the draft version of the EU Corporate Sustainability Due Diligence (CSDD) Directive.

Suppliers to MVV Energie, Energieversorgung Offenbach, Juwi and Stadtwerke Kiel are regularly assessed in terms of their sustainability, risks and compliance, as are the subcontractors we approve. In our supplier management system, all suppliers are required to provide disclosures on whether they have compliance or anticorruption requirements and a code of conduct, as well as on whether they are committed to the UN Global Compact. Moreover, they must disclose whether they have a sustainability concept and, if so, how this is implemented. Corresponding information and certificates are deposited in our supplier management system. These aspects are monitored within our compliance management system.

For the most important of our strategic suppliers, we perform additional in-depth analyses of their strategy and of the climate protection and sustainability measures they have in place. Compliance with social welfare standards also forms part of our contract awarding process. As a general rule, we do not obtain data from suppliers located further upstream in the supply chain ourselves, but rather draw on external sources of information.

The overwhelming share of our business activities takes place in Germany, the UK and the Czech Republic, i.e. in European countries where respect for human rights is a core aspect of entrepreneurial activity. Within our supplier management, we have taken specific measures to perform a sustainability evaluation of select business areas with potentially critical conditions. Acquisition of companies or shareholdings are subject to painstaking due diligence that also covers compliance with human rights, adherence to compliance-related requirements and further sustainability aspects, such as environmental protection and occupational safety.

Large numbers of subcontractors, most of which based in European countries, work on behalf of MVV. As human and employee rights are legally protected in these countries, we assume that employment conditions there are humane. High safety standards are also important to us for our subcontractors. We are therefore committed to ensuring that they comply with legal requirements and have issued corresponding requirements which provide, for example, for health and safety instructions to be issued to employees at third-party companies. We review our subcontractors in individual cases, particularly for major projects. We do not yet keep comprehensive records of working conditions at our subcontractors, especially at their production locations, but draw here too on external sources of information.

Compliance and respect for human rights

Compliance

Our compliance management system (CMS) supports us in safeguarding compliance with applicable laws, as well as with in-company guidelines and the ethical standards to which we are committed. The CMS is intended on the one hand to ensure that our managers and employees understand and adhere to these guidelines and standards and on the other hand to monitor all relevant business activities and processes within our Group.

We have summarised the most important requirements and necessary organisational structures and processes in our Compliance Management Handbook. This also lists the names of those employees who are responsible for our reporting system and describes the relevant processes in detail. The handbook is binding for all companies at the Mannheim subgroup of MVV Energie AG and is permanently available for downloading to all employees at this subgroup. The other subgroups have introduced equivalent compliance management systems.

MVV's Compliance Officer is responsible for our CMS with regard to its contents, organisation and processes. He compiles the relevant compliance regulations, updates these, and exchanges information with the various organisational units involved. He documents the regulations and ensures that they are implemented within business processes. Moreover, he is responsible for ensuring that employee training measures are implemented and that all CMS processes are adhered to. Furthermore, he acts in an advisory capacity to support measures intended to prevent and where necessary, investigate any violations of the law, corruption or deliberate acts harmful to the company. The Compliance Officer reports to the Executive Board regularly and whenever otherwise required by specific developments, as well as to the Audit Committee in the context of the annual financial statements.

We have structured our CMS in such a way that any breaches of compliance are avoided on a preventative basis, particularly by implementing preventative measures in the respective business processes (systemic compliance). We perform advance checks on relevant processes in sensitive areas, for example, and act early to take corrective measures where necessary. Donations and payments to parties and political organisations are strictly prohibited. Payments to equity providers exclusively take the form of dividends.

We aim to avoid any infringements of compliance requirements on a preventative basis.

We rely on active prevention measures within the actual business processes already in order to avert criminal or grossly improper violations of the law. Here, we pursue a zero-tolerance policy towards bribery and all other forms of corruption. With regard to corruption prevention, we provide extensive training to our employees, particularly those working in sales, related areas and procurement. We show them, for example, how to deal with gratuities and invitations, which we record and check. With these measures, we minimise the risk of so-called soft bribery. We likewise continually monitor all business fields, specialist divisions, group departments and subsidiaries to ascertain whether compliance requirements have been observed. Moreover, employees and third parties can contact the Compliance Officer or an external confidence lawyer directly via anonymous "whistle-blower" hotlines and thus provide tip-offs of potential misconduct. Among other places, the telephone number of the confidence lawyer is also published on our website at **www.mvv.de.**

Regular training is provided to all of MVV's managers and employees who have contact to customers, service providers or suppliers, as well as to employees with other latent compliance-related risk exposure, to ensure that they are extensively informed of general compliance requirements and also familiar with the legal requirements relevant to their respective business units. Examples of the topic covered by this training are combating corruption and money laundering, capital market, stock market, competition and cartel law, handling sanction lists, respect for human rights and the relevant requirements of energy industry law. In the 2022 financial year, 373 employees at the Mannheim subgroup and 441 employees at the other subgroups took part in this training.

Due to the coronavirus pandemic, most training sessions were still held as video conferences rather than in person. In parallel, 2,615 individuals completed an e-learning programme in the same period that was offered by our Stadtwerke Kiel and Energieversorgung Offenbach subsidiaries and the Juwi subgroup. All managers from a specific management level upwards are required to submit a Compliance Management Declaration (CMD) at the end of each financial year. The same requirement applies to the managing directors of our subsidiaries and select other shareholdings. In this, they must state whether all relevant compliance regulations and legal requirements have been complied with. Among others, the questions in the CMD include asking whether the employees of the individual manager have received the required instruction and suitable training for the CMS. Moreover, in the context of the CMD the managers also provide detailed responses to questions specifically tailored to circumstances at their respective business unit.

Legal responsibility and liability

Questions relating to legal responsibility and liability arise in the environment in which the energy industry operates. We report on MVV's legal risks in the chapter Opportunity and Risk Report.

Respect for human rights

Respect for human rights is also integrated into our compliance management system. In our human rights policy **www.mvv.de/responsibility,** we underline our commitment to internationally recognised principles of human rights. With this commitment, we also take due account of the National Action Plan for Business and Human Rights (NAP) and the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (LkSG). Our human rights policy was adopted by our Executive Board, while the management at our companies and locations is responsible for compliance with the resultant requirements.

MVV's Human Rights Officer, who reports directly to the Executive Board, is responsible for ensuring that the requirements of the LkSG legislation are met. He is responsible for risk management relevant to human rights issues and for making sure that statutory due diligence obligations are adhered to in business processes. Among other aspects, this involves performing a human rights risk analysis each year and on specific occasions, implementing processes to prevent any violations of human rights in the supply chain and our own activities and meeting statutory reporting obligations. As the central point of contact, he is the first person to turn to for employees working in procurement. Not only that: In the event of potential violations, he ensures that these are remedied and investigated. It is important to us that all suspected cases should be recorded and reviewed. To this end, employees and third parties can either contact MVV's Human Rights Officer directly or use the anonymous whistle-blower hotline. We have published the relevant information in German and English on our homepage.

Employee training on the topic of human rights forms part of the obligatory compliance training.

In the year under report, we further developed the due diligence process and other processes relating to the supply chain in our "Sustainable Supply Chain" workgroup, which operates across business units and locations. The workgroup promotes the further development and harmonisation of existing processes in the field of supply chain management; it therefore also addresses compliance with human rights and raises awareness within the organisation for potential human rights risks. Moreover, in the Group's most important procurement units we successfully implemented projects intended to further develop existing risk management processes relating to human rights and ecology. In this year's due diligence process performed to identify any potential risks relevant to human rights, we concluded that there were no risks relevant to our reporting in terms of great significance or high probability of occurrence.

Other aspects

Promoting the digital transformation

Digitalisation is a major component of our corporate strategy. We make targeted use of digitalisation instruments to create modern hybrid ways of working and cooperating with each other and to continually enhance the efficiency and networking of our own business processes. Moreover, we use digital applications to increase our efficiency by optimising our own plants and grids with data-driven technologies and control systems. At the same time, we draw on the possibilities offered by digitalisation to analyse the energy situation for our customers, for example, and to structure individual optimal solutions. This way, we can also reduce the long-term environmental impact of energy consumption. Smart cities are another field of application now emerging for digital products. Digital solutions not only offer economic benefits, they also provide opportunities to reach ecological and social objectives. Viewed as a whole, the decentralised new energy world needs smart control and offsetting mechanisms. This being so, digitalisation, and here in particular the processing of large volumes of data using artificial intelligence (AI), is an important building block to make the energy industry, and thus also MVV, fit for the future. At MVV Trading, we have therefore founded a new unit that will implement and operate model-based trading strategies in modern cloud-based system architectures. Adaptable IT and a well-structured approach to data handling form the foundation enabling us to permanently secure a resilient competitive position and to deploy AI in other applications too. Like many other companies, we too are preparing to transition to the new world of SAP S/4HANA. We are thus streamlining, harmonising and automating our processes. With a joint and harmonised data model, we are laying a foundation to make more intensive use of data and fully exploit the potential offered by AI applications. At MVV, the overriding topic of digitalisation is being implemented in all business fields. We coordinate key aspects of this in our overall digitalisation programme.

Information security and data protection still in focus

We are committed to protecting sensitive information and data with a wide range of technical and organisational measures and generally adhere to the principle of data economy. One guarantor of this approach is the high level of awareness we have cultivated among our employees for this important topic. This applies in particular to personal data, which we collect in connection with the solutions and service products we offer to our customers and for employment and other contractual relationships with employees and suppliers. We process this in accordance with data protection requirements. Working with an information security management system based on the international norm DIN ISO 27001 and a continually growing data protection management system, the employees entrusted with this task manage and monitor the security of business processes in terms of IT and data protection law both centrally and on a decentralised basis and ensure that the information is protected against unauthorised viewing, loss or manipulation. Our measures to protect against cyberattacks, which are challenging corporate IT in increasing numbers, are also to be viewed in this context. All measures we implement in terms of information security and data protection are intended to detect and manage any potential risks. Our goal here is to maintain existing relationships of trust with our customers, shareholders, suppliers, service providers and employees and, where possible, to further extend this trust. In the year under report, we met our objective of sustainably protecting information and personal data by drawing on numerous technical and organisational measures and further raised awareness levels for this topic among our employees.

EU Taxonomy

The Sustainable Finance Action Plan (SFAP) plays a key role within the EU's Green Deal. It is intended to redirect capital flows towards environmentally sustainable technologies and companies. The framework for this plan is provided by Regulation EU 2020/852 (EU Taxonomy), which serves as a system of classification and, in supplementing Delegated Acts, lays down the technical criteria governing whether economic activities may be classified as "environmentally sustainable". Environmentally sustainable economic activities have to make a substantial contribution to one of the six following environmental objectives (pursuant to Article 9 of the EU Taxonomy):

1. Climate change mitigation
2. Climate change adaptation
3. The sustainable use and protection of water and marine resources
4. The transition to a circular economy
5. Pollution prevention and control
6. The protection and restoration of biodiversity and ecosystems

To determine whether they make a substantial contribution, the EU Taxonomy divides economic activities by reference to their taxonomy eligibility and alignment:

Pursuant to Articles 10 to 15 of the EU Taxonomy, **taxonomy-eligible** economic activities are activities that are described in the annexes to the Delegated Act. This classification is irrespective of whether or not the activities meet the technical screening criteria that have to be reviewed in the next stage.

Pursuant to Articles 10 to 18 of the EU Taxonomy, **taxonomy-aligned** and thus environmentally sustainable economic activities only include those activities that are described in the annexes to the Delegated Act, make a substantial contribution to achieving one or several of the six environmental objectives and do no significant harm ("DNSH") to achievement of the other five environmental objectives. These two latter conditions are deemed to have been met if the economic activities satisfy the currently valid version of the technical screening criteria. Moreover, compliance with minimum safeguards has to be ensured for all environmentally sustainable economic activities.

At present, the annexes to the Delegated Act only include final classification criteria for the first two environmental objectives, namely "climate change mitigation" (Annex 1) and "climate change adaptation" (Annex 2). These took effect as of 1 January 2022. The classification criteria for the other four environmental targets are due to be finalised by the end of 2022 and then take effect from 2023. In early March 2022, the European Commission published a Complementary Delegated Taxonomy Act on the environmental objectives of "climate change mitigation" and "climate change adaptation". This defines the criteria which, if met, allow investments in gas and nuclear activities to be classified as environmentally sustainable, as these activities have the potential to assist in accelerating the transition to a climate-neutral future with predominantly renewable energies. The Complementary Act requires mandatory application from 1 January 2023.

Implementation of EU Taxonomy at MVV

For first-time application of the EU Taxonomy reporting requirements, practical expedients have been provided in the form of an option. For the 2022 financial year, MVV is obliged to report on its taxonomy-eligible economic activities, as well as on their respective shares of its sales ("turnover"), investments ("CapEx") and operating expenses ("OpEx"). Over and above the statutory disclosures, for the 2022 financial year we have also voluntarily reported on our taxonomy-aligned economic activities and their respective shares of turnover, CapEx and OpEx. In the context of this Non-Financial Declaration, MVV also decided to make voluntary full application of the Complementary Act dated March 2022. This means we have reported all economic activities relevant to environmental objectives 1 and 2.

Identification and classification of our economic activities

We began by analysing all of MVV's economic activities on the basis of the descriptions provided in the Delegated Act and its annexes and then identifying our taxonomy-eligible activities (eligibility review).

On this basis, as well as of our assessment of compliance with the substantial contribution, DNSH and minimum safeguard requirements, we concluded for the 2022 financial year that the economic activities thereby identified contribute to the "climate change mitigation" environmental objective. According to the Delegated Act, these economic activities should account for the need to avoid greenhouse gas emissions arising, reduce such emissions or increase the reduction in greenhouse gases and long-term carbon storage. In the further process performed on our taxonomy-eligible activities to review their environmental sustainability (alignment review), we investigated the contribution they make to the second environmental objective of "climate change adaptation". Here, we established that allocation to the first environmental objective of "climate change mitigation" was currently suitable for MVV's economic activities. We will subject the allocation of our activities to the "climate change mitigation" environmental objective to an alignment review once again in subsequent years in conjunction with the newly added environmental objectives. Moreover, we will then review whether further MVV economic activities are to be classified as taxonomy-eligible or taxonomy-aligned.

In the next step, all economic activities identified were subject to an alignment review.

The recording and review of economic activities in terms of their taxonomy alignment is performed with the assistance of uniform assessment forms across the Group. These were devised on the basis of the Delegated Act and Annex 1 and serve as worksheets and documentary evidence. The review process is centrally managed, while the review of the respective economic activity takes place on a decentralised basis at the organisational unit responsible for the activity.

Review step 1: substantial contribution to the "climate change mitigation" environmental objective
This review is performed on an individual basis for each economic activity by reference to the technical screening criteria contained in Article 10 of the EU Taxonomy in conjunction with Annex 1 of the Delegated Act.

Review step 2: do no significant harm
A review is performed for each economic activity to ascertain whether it does any significant harm to the other environmental objectives. The DNSH criteria set out in Annexes A to E of Annex 1 to the Delegated Act chiefly relate to compliance with European and/or German legal requirements. "Significant" harm to the achievement of other objectives, for example, depends on the respective severity and probability of occurrence, but also on whether significantly better alternatives are available on the market.

Due to our energy industry activities, the review of DNSH conformity for the "climate change adaptation" environmental objective formed the key focus of our DNSH review process. We began by identifying climate risks on Group level. To evaluate climate risks and the climate forecast scenario, we accounted for all climate scenarios listed in Annex 1, but then focused our analysis on the future scenario RCP 2.6 "optimistic" in the 2021 Climate Impact and Risk Analysis (KWRA 2021) for Germany published by the German Federal Environment Agency (UBA). Moreover, select risks contained in the table in Section II of Annex A to Annex 1 were referred to when classifying climate risks. In our risk analysis, we assumed that the climate risks classified in Annex 1 will only arise from 2030 in terms of their frequencies and relevance. This follows the approach and context of the KWRA 2021, whose climate risk concept is based on the definition of the International Panel on Climate Change (IPCC) and the RCP 2.6 scenario. The analysis of unsubstantial risk fields resulted in the identification of five climate risks relevant to MVV. These were initially assessed in terms of their basic materiality without regard to the specific location of an economic activity. This was intended to facilitate the compilation and, where applicable, implementation of adaptation solutions.

The next step involved assessing the climate impact of the economic activities and/or plants over their expected lifetime. We performed this vulnerability assessment by conducting expert interviews on the level of the respective economic activity. Where initial statement led to identifiable substantial risks by 2030 and if MVV's respective economic activity or the plant was to be operated at the respective location for longer than a further ten years, a location analysis was performed in a further step. A climate risk assessment from the middle of the century for the cities and MVV locations of Mannheim, Wörrstadt and Offenbach, which are geographically close, was performed in detail for Offenbach. The findings of this risk assessment can be mapped from Offenbach to the other locations.

Review step 3: compliance with minimum safeguards for the topics of human rights (including employee and consumer rights), corruption and bribery, taxation and fair competition

We have adopted a groupwide approach to determine compliance with the minimum safeguards pursuant to Article 18 of the EU Taxonomy. With this approach, we ensure that due diligence obligations in respect of human rights are complied with on the level of individual economic activities. The same applies for our efforts to combat corruption and bribery. A key role is played in this respect by our compliance management system (CMS), which we report on in the section Compliance and Human Rights of this Non-Financial Declaration. This assists us in ensuring that all applicable laws are complied with, as are internal company guidelines and the ethical standards to which we are committed. Respect for human rights is also integrated in our CMS. With our Human Rights Policy, we underline our commitment to internationally recognised human rights norms, conventions, principles and policies. Among others, these include the International Bill of Human Rights of the United Nations (UN), the OECD Guidelines for Multinational Enterprises, the Ten Principles of the UN Global Compact, the Guiding Principles on Business and Human Rights of the United Nations and the Core Labour Standards of the International Labour Organization (ILO). These also form part of our Suppliers Code of Conduct. Moreover, we also further developed our supply chain-related processes in our "Sustainable Supply Chain" workgroup, which covers activities in all our business fields and at all our locations. Potential violations of human rights in the photovoltaics supply chain, a relevant topic in this year under report, were also subject to close risk monitoring and suitable precautionary measures. We report on this in the section Respect for Human Rights and Combating Corruption and Bribery Aspect of this Non-Financial Declaration.

MVV has implemented a group tax policy and a tax-related internal control system to safeguard compliance with all statutory and other relevant tax law requirements, guidelines and ethical standards. These govern the company's tax strategy, organisation, processes and control activities. MVV is not aware of any cases as of the balance sheet date in which it has been finally found to have violated tax laws.

We promote employee awareness of the importance of compliance with all applicable competition laws and regulations. Neither the company nor its senior management have been finally convicted either of violating competition laws or of corruption.

On this basis, we concluded overall that MVV complies with the requirements of the minimum safeguards.

Where the respective economic activity cumulatively meets all points of the three review steps outlined above, we classify this activity as "taxonomy-aligned". For the 2022 financial year, we identified the following economic activities as being taxonomy-aligned.

Overview of all taxonomy-aligned economic activities FY 2022

Economic activity pursuant to EU Taxonomy		Environmental objective [1]	MVV's activity
4.1.	Electricity generation using solar photovoltaic technology	Climate change mitigation	Projecting and construction of photovoltaics parks and generation of electricity from photovoltaics systems
4.3.	Electricity generation from wind power	Climate change mitigation	Projecting, construction and generation of electricity from onshore wind turbines
4.5.	Electricity generation from hydropower	Climate change mitigation	Generation of electricity from hydropower plants
4.8.	Electricity generation from bioenergy	Climate change mitigation	Generation of electricity from biomethane and biogas plants
4.9.	Transmission and distribution of electricity	Climate change mitigation	Distribution grid operator for electricity
4.11.	Storage of thermal energy	Climate change mitigation	Use of heat storage facilities
4.13.	Manufacture of biogas and biofuels for use in transport and of bioliquids	Climate change mitigation	Biomethane production
4.14.	Transmission and distribution networks for renewable and low-carbon gases	Climate change mitigation	Distribution grid operator for green gases
4.15.	District heating/cooling distribution	Climate change mitigation	District heat supply
4.16.	Installation and operation of electric heat pumps	Climate change mitigation	Construction and operation of a river heat pump
4.20.	Cogeneration of heat/cool and power from bioenergy	Climate change mitigation	Electricity generation using CHP at biomass plants
4.24.	Production of heat/cool from bioenergy	Climate change mitigation	Heat generation at biomass plants
4.25.	Production of heat/cool using waste heat	Climate change mitigation	Use of waste heat for district heat supply
4.31.	Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	Climate change mitigation	Gas-based backup facilities for district heat supply
5.1.	Construction, extension and operation of water collection, treatment and supply systems	Climate change mitigation	Water production and supply
5.5.	Collection and transport of non-hazardous waste in source segregated fractions	Climate change mitigation	Storage, use, treatment and elimination of waste
5.7.	Anaerobic digestion of bio-waste	Climate change mitigation	Biomethane production from bio-waste
6.15.	Infrastructure enabling low-carbon road transport and public transport	Climate change mitigation	Public charging infrastructure activities
7.3.	Installation, maintenance and repair of energy efficiency equipment	Climate change mitigation	LED contracting
7.4.	Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	Climate change mitigation	Charging infrastructure activities for business and commercial customers
7.5.	Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	Climate change mitigation	Meter operations
7.6.	Installation, maintenance and repair of renewable energy technologies	Climate change mitigation	Installation of photovoltaics systems for business, commercial and retail customers
9.3.	Professional services related to energy performance of buildings	Climate change mitigation	Energy efficiency consulting for business, commercial and industrial customers

1 As of 30 September 2022, all of MVV's activities have been allocated to the "Climate change mitigation" environmental objective.

For the 2022 financial year, we also classified the following economic activities as being taxonomy-eligible but not yet taxonomy-aligned:

Overview of all taxonomy-eligible but not taxonomy-aligned economic activities FY 2022

Economic activity pursuant to EU Taxonomy		Environmental objective [1]	MVV's activity
4.29.	Electricity generation from gaseous fossil fuels	Climate change mitigation	Gas power plants
4.30.	High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	Climate change mitigation	Generation of electricity and heat using gas-based CHP
4.31.	Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	Climate change mitigation	Gas-based backup facilities for district heat supply
8.2.	Data-driven solutions for GHG emissions reductions	Climate change mitigation	Energy data collection and management systems

1 As of 30 September 2022, all of MVV's activities have been allocated to the "Climate change mitigation" environmental objective.

Focus on climate protection

As already outlined, all taxonomy-aligned economic activities make a substantial contribution to the "climate change mitigation" environmental objective. The EU Taxonomy and the Delegated Act include a selection of economic activities and thus not all conceivable activities. As a result, we have classified activities as non-taxonomy-eligible even though we believe they make an important contribution to climate protection. Examples here include the construction of new and operation of existing energy from waste plants and the use of waste timber at CHP plants. To withdraw carbon from the cycle we plan to capture carbon (CCU) by equipping our energy from waste plants accordingly. Further information about these activities can be found in, among others, the section Environmental Concerns Aspect of this Non-Financial Declaration.

We see the entry into effect of a new Delegated Act, including further annexes and thus additional environmental objectives, as offering the possibility to classify further MVV activities as taxonomy-eligible and taxonomy-aligned.

Calculation and definition of EU Taxonomy KPIs

We based our calculation of taxonomy-eligible and taxonomy-aligned shares on the following approach: Key performance indicators (KPIs) have been calculated based on the accounting policies applied in the consolidated financial statements that, pursuant to § 315e (1) HGB, we prepare in accordance with International Financial Reporting Standards (IFRS).

KPIs have basically been determined on the basis of the data in our consolidated financial statements. Where the calculation of EU Taxonomy KPIs and relevant components of such requires reference to local IT systems or the use of calculation keys, process conformity is safeguarded with suitable internal checks both in terms of processes (dual control principle) and of system assistance (validation), thus also avoiding duplicate inclusion.

Sales (turnover) correspond to adjusted sales excluding energy taxes. To determine this KPI, we adjust sales after electricity and natural gas taxes as stated in the Income Statement as of the balance sheet date to eliminate the difference between the hedge and reporting date prices as of the respective realisation date pursuant to IFRS 9 (further details can be found in the chapter Presentation of Earnings Performance in the chapter Group Business Performance). The taxonomy-eligible and taxonomy-aligned shares of our sales are determined by presenting total adjusted sales in our taxonomy-eligible and taxonomy-aligned economic activities (numerator) as a percentage of the MVV Group's adjusted sales (denominator). Further details can be found in the EU Taxonomy Tables.

Pursuant to EU Taxonomy requirements, **investment expenses** correspond to additions to intangible assets and property, plant and equipment. These are determined without including depreciation and amortisation, remeasurements or fair value changes. Furthermore, the investment concept used in the EU Taxonomy requires inclusion of the following additions:

- Additions to property, plant and equipment pursuant to IAS 16.73 (e) (i) and (iii)
- Additions to intangible assets pursuant to IAS 38.118 (e) (i)
- Additions to investment properties pursuant to IAS 40.79 (d) (i) and (ii)
- Additions to right-of-use assets pursuant to IFRS 16.53 (h)

The definition of investment expenses in the EU Taxonomy thus diverges from our definition of the investments KPI. In the following table we show how we reconcile investment expenses as defined in the EU Taxonomy with our investments in the 2022 financial year. Further information about MVV's investments can be found in the chapter Presentation of Asset Position.

Reconciliation of investment expenses

Euro million	FY 2022
Investment expenses pursuant to EU Taxonomy Regulation	**350**
+ Unfinished products in connection with finance leases	+ 5
+ Financial assets	+ 37
– Dismantling obligations	– (– 6)
– Right-of-use assets	– 18
– Company acquisitions	– 45
Investments pursuant to MVV definition	**335**

The taxonomy-eligible and taxonomy-aligned shares of our investment expenses are determined by presenting our total taxonomy-eligible and taxonomy-aligned investment expenses (numerator) as a percentage of the MVV Group's investments pursuant to the EU Taxonomy Regulation (denominator). Further details can be found in the EU Taxonomy Tables. In the 2022 financial year, virtually all our taxonomy-eligible investment expenses were also taxonomy-aligned. The numerator thus represents the "CapEx Category a" as defined in the Annex to the Delegated Act.

According to the Annex to the Delegated Act, the numerator for investment expenses also includes investment expenses in "CapEx Category b" and "CapEx Category c". Investment expenses that contribute to extending taxonomy-eligible economic activities, or to converting taxonomy-eligible economic activities into taxonomy-aligned economic activities within a CapEx plan require report in "CapEx Category b". The review of investments to assess their taxonomy eligibility or alignment is performed on the basis of individual investment projects and programmes. This process covers all current investment measures at MVV. In this respect, investments that extend beyond the current financial year and form part of our long-term investment programme are also included. No investment expenses requiring allocation to "CapEx Category b" were identified in the 2022 year under report.

Individual investments that relate to the acquisition of production for taxonomy-aligned economic activities and individual measures by means of which the target activities can be executed on a low-carbon basis or emissions of greenhouse gases reduced require report in "CapEx Category c". At MVV, these relate above all to investments involving cross-departmental activities, particularly at office buildings or in our vehicle pool. MVV only has material investments in Category a. Investments in Category c involve marginal and non-strategic investments and are also negligible in terms of their volume. The review of these investments for the 2022 financial year concluded that they accounted for significantly less than 1 % of our total investments. There is therefore no material CapEx in Category c that requires inclusion in the numerator.

The numerator and denominator used to calculate the **operating expenses** KPI are defined in the Delegated Act. Pursuant to the EU Taxonomy, the denominator comprises direct non-capitalised operating expenses for research and development, building refurbishment, short-term leases, maintenance and repairs, and all other direct expenses relating to the day-to-day maintenance of items of property, plant and equipment that are required to safeguard the ongoing effective functionality of these assets.

At MVV, this item chiefly comprises employee benefit expenses, cost of materials and other operating expenses, including prorated IT expenses for maintaining, repairing and cleaning energy generation and distribution facilities, and short-term lease expenses. Expenses for research and development and for building refurbishment currently only play a subordinate role at MVV.

According to the EU Taxonomy, the numerator comprises the share of those operating expenses included in the denominator that relate to assets or processes involved in taxonomy-aligned and taxonomy-eligible economic activities respectively (OpEx Category a). At MVV, the numerator simultaneously constitutes “OpEx Category a”.

Pursuant to the Annex to the Delegated Act, the numerator also includes the share of those operating expenses included in the denominator for “OpEx Category b” and “OpEx Category c”. We refer in this respect to the comments made above for investment expenses in “CapEx Category b” and CapEx Category c”. Accordingly, no material operating expenses requiring allocation to “OpEx Category b” or “OpEx Category c” were identified in the 2022 year under report. The amounts stated for OpEx were in some cases determined with the assistance of suitable value-based calculation keys.

Overview of EU Taxonomy KPIs

The complete disclosures of key performance indicators (KPIs) relating to taxonomy-eligible and taxonomy-aligned economic activities are presented in the chapter Other Disclosures.

EU Taxonomy KPIs: sales (turnover), investment expenses (CapEx) and operating expenses (OpEx)

	FY 2022 Euro million	FY 2022 Share %
Total sales (turnover)	**4,199**	**100.0**
of which taxonomy-eligible	934	22.2
of which taxonomy-aligned	756	18.0
Total investment expenses (CapEx)	**350**	**100.0**
of which taxonomy-eligible	264	75.6
of which taxonomy-aligned	262	74.9
Total operating expenses (OpEx)	**584**	**100.0**
of which taxonomy-eligible	159	27.3
of which taxonomy-aligned	156	26.6

Based on the number of taxonomy-eligible economic activities reported, it is apparent that MVV can report a very high number of economic activities compared with other energy companies. This clearly shows that we offer numerous business models and products that are consistent with the objectives targeted by the EU. The fact that the predominant share of our taxonomy-eligible economic activities are also taxonomy-aligned also affirms the course we have taken towards a sustainable energy supply and green energy-related services.

Sales (turnover)

We generate the overwhelming share of our sales by selling electricity and gas to our business, commercial, industrial and retail customers and, linked to these activities, with commodities trading (please see the comments provided in the chapter Presentation of Earnings Performance). These business activities are not recorded as economic activities in the EU Taxonomy. This means that only a relatively minor share of our sales is within the scope of the EU Taxonomy and thus taxonomy-eligible.

In the 2022 financial year, taxonomy-eligible economic activities accounted for a 22 % share of our sales. Of these, more than 80 % are also taxonomy-aligned and thus environmentally sustainable. Significant sales contributions came from our renewable energies project development business, electricity generation based on renewable energies and our activities in the distribution of electricity, water and district heat. For individual economic activities, such as the operation of our natural gas distribution grids (EA 4.14), taxonomy requirements do not permit any sales to be stated, but only investments. It is also only permitted to report a very low share of the revenues generated from operating our energy from waste plants in the environmental energy business field. The economic activities relating to natural gas generation (EA 4.29 to 4.31) include numerous individual power plants. As valuation is always based on asset level, both taxonomy-eligible and only taxonomy-aligned contributions have been stated. We assume that, based on suitable documentary evidence of the specific technical criteria, it will be possible in future to report part of the sales currently stated as not yet taxonomy-aligned as then being taxonomy-aligned.

Investment expenses (CapEx)

We have had a broad-based investment programme with a long-term horizon for many years. This programme is geared to our ambitious decarbonisation and sustainability targets (please also see the comments provided in the section Environmental Concerns Aspect of this Non-Financial Declaration). Most of our investments relate to projects that contribute to climate protection, such as investments in energy from waste plants or supply reliability that demonstrably reduce CO_2 emissions. However, not all of these investments are covered by the EU Taxonomy.

In the 2022 financial year, 76 % of our investments were within the scope of the EU Taxonomy and thus taxonomy-eligible. Virtually all taxonomy-eligible investments were simultaneously taxonomy-aligned. These therefore count as environmentally sustainable investments. To date, the EU Taxonomy only covers a fraction of business activities in industry and the services sector, including the energy industry. Our high ratio thus confirms that we are investing in the right, i.e. sustainable areas. The majority of our investments was channelled into our electricity and district heat grids, photovoltaics systems and wind turbines, and the generation of energy from waste heat. Avantag, a subsidiary we acquired in the year under report, also made a positive contribution. As they depend on implementation of larger-scale projects, we expect investment contributions from individual economic activities to fluctuate sharply between individual years.

SALES (TURNOVER)
Shares (%)

	FY 2022
of which taxonomy-aligned	18
of which taxonomy-eligible	22
of which non-taxonomy-eligible/not classified by EU Taxonomy	78

INVESTMENTS (CAPEX)
Shares (%)

	FY 2022
of which taxonomy-aligned	75
of which taxonomy-eligible	76
of which non-taxonomy-eligible/not classified by EU Taxonomy	24

Operating expenses (OpEx)

Of our operating expenses (OpEx) in the 2022 financial year, 27 % were within the scope of the EU Taxonomy. Of taxonomy-eligible operating expenses, 98 % were also taxonomy-aligned. The largest items relate to electricity, heat and water grids, as well as to the operation and maintenance of renewable energy plants. As the definition of operating expenses in the EU Taxonomy differs significantly from the definition usually applied in a commercial context, the key figures reported for the EU Taxonomy do not allow any robust conclusions to be drawn or analyses compiled with regard to the amount or structure of such expenses.

OPERATING EXPENSES (OPEX)
Shares (%)

	FY 2022
of which taxonomy-aligned	27
of which taxonomy-eligible	27
of which non-taxonomy-eligible/not classified by EU Taxonomy	73

Meaningfulness of EU Taxonomy for MVV

Reporting in line with EU Taxonomy indicators for the first time in full has confirmed our opinion that the conclusions that can be drawn on this basis with regard to MVV's sustainability-related activities are highly limited. On the one hand, the KPIs show that the overwhelming share of business activities covered by the taxonomy are also taxonomy-aligned, i.e. sustainable. On the other hand, only around a fifth of our business (measured in terms of sales) is covered by the taxonomy at all. At the same time, we are convinced that products and services such as directly marketing renewable energies or selling green commodities are sustainable. If the meaningfulness of the KPIs is to be enhanced, we believe it will be necessary to significantly broaden the scope of the taxonomy in future to cover all economic activities.

Business Performance of MVV Energie AG

Notes to annual financial statements of MVV Energie AG (HGB)

As the publicly listed parent company of the MVV Energie Group ("MVV"), MVV Energie AG prepares its annual financial statements based on the requirements of the German Commercial Code (HGB) and the supplementary requirements of the German Stock Corporation Act (AktG) and the German Energy Industry Act (EnWG). The consolidated financial statements of MVV Energie AG are prepared in line with International Financial Reporting Standards (IFRS) as adopted by the EU. Unlike in the HGB separate financial statements, in the consolidated financial statements income and expense items at consolidated subsidiaries are included in individual income and expense items in the consolidated income statement. Further differences between the separate financial statements of MVV Energie AG and the consolidated financial statements relate in particular to differences between the requirements of commercial law and those of IFRS international accounting standards in terms of the recognition and measurement of individual items.

The annual financial statements of MVV Energie AG, the consolidated financial statements of MVV and the combined management report for the 2022 financial year are published in the Federal Gazette (Bundesanzeiger). The complete 2022 annual financial statements of MVV Energie AG can be downloaded at **www.mvv.de/investors,** as can the consolidated financial statements and the combined management report.

By adopting the German Coal Exit Act (KAG) on 3 July 2020, lawmakers demonstrated their commitment to moving towards a climate-neutral energy system on economically sustainable terms. The coal exit resolved by the Federal Parliament provides for a gradual end to the generation of electricity from coal by 2038 at the latest. While the KAG includes legal requirements which set binding and thus plannable decommissioning dates for lignite power plants, backed up by a public law contract, the exit from generating electricity from hard coal will initially be managed with tenders and only subsequently with legal requirements. For new hard coal power plants, the KAG states that premature write-downs and undue hardship should be avoided. This may be achieved by providing compensation consistent with state aid requirements in cases of undue hardship or by implementing measures with the same effect.

The entry into effect of the KAG has led to shorter useful lives for the generation blocks at the power plant Grosskraftwerk Mannheim. At MVV, this led to additional expenses in a medium single-digit million amount in the year under report. These do not account for profits lost for the years of operation not realised between the date of statutory decommissioning and the original operating life, if longer, or for compensation granted for undue hardship.

Future compensation of this nature for expenses caused by the coal exit has been recognised under other receivables at the MVV RHE subsidiary.

Presentation of earnings performance of MVV Energie AG

Income statement

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021
Sales	2,813,211	1,631,755
Less electricity and natural gas taxes	– 126,701	– 125,782
Sales less electricity and natural gas taxes	**2,686,510**	**1,505,973**
Increase or reduction in finished and unfinished products	173	–
Other own work capitalised	81	41
Other operating income	60,685	28,586
Cost of materials	2,465,694	1,302,656
Employee benefit expenses	81,975	83,890
Depreciation and amortisation	21,356	20,480
Other operating expenses	130,698	96,112
Financial results	101,220	108,714
Taxes on income	31,296	29,292
Earnings after taxes	**117,650**	**110,884**
Other taxes	421	368
Annual net income	**117,229**	**110,516**
Allocation to other revenue reserves	48,027	41,314
Unappropriated net profit	**69,202**	**69,202**

Due to higher wholesale prices on the energy markets, sales less energy taxes at MVV Energie AG grew year-on-year by Euro 1,181 million to Euro 2,687 million. MVV Energie AG thus met its forecast of generating significantly higher sales than in the previous year. The company generated its sales exclusively in Germany. The electricity business accounted for 68.0 % of total sales (previous year: 61.3 %) and thus remains the largest division in terms of sales at MVV Energie AG.

At Euro 2,466 million, cost of materials was Euro 1,164 million higher than in the previous year. The change in this line item largely reflects the development in sales.

Other operating income rose by Euro 32 million to Euro 61 million. This increase was primarily due to write-backs of impaired loans and debtor warrants in connection with associates due to company restructuring measures. These factors were countered by lower reversals of provisions.

MVV Energie AG had 900 employees at 30 September 2022, 10 more than at the previous year's balance sheet date. Due to adjustments in personnel provisions, the employee benefit expenses of Euro 82 million were Euro 2 million lower than in the previous year.

At Euro 21 million, depreciation and amortisation were at around the previous year's level. No impairment losses were recognised on intangible assets or property, plant and equipment in the year under report or the previous year.

Other operating expenses increased by Euro 35 million to Euro 131 million. This change was chiefly due to higher allowances for receivables and increased additions to provisions.

The financial result decreased year-on-year by Euro 8 million to Euro 101 million. This development was due above all to higher amounts of losses assumed and higher write-downs of financial assets.

At Euro 118 million, earnings after taxes were Euro 7 million higher than in the previous year. Following the deduction of other taxes, MVV Energie AG generated annual net income of Euro 117 million in the 2022 financial year and thus met its forecast that annual net income would be slightly higher than in the previous year. Based on the profit utilisation resolution adopted by the Annual General Meeting on 11 March 2022, the unappropriated net profit of Euro 69 million was fully distributed to the shareholders of MVV Energie AG. The dividend amounted to Euro 1.05 per share.

Revenue reserves of Euro 48 million were formed from the annual net income for the year under report. MVV Energie AG reported unappropriated net profit of Euro 69 million at 30 September 2022. The Annual General Meeting to be held on 10 March 2023 will decide on the dividend proposal adopted by the Executive and Supervisory Boards. The Executive Board will propose the distribution of a dividend of Euro 1.05 per share for approval by the Annual General Meeting (previous year: Euro 1.05 per share); the Supervisory Board will decide on its proposal in December 2022.

Presentation of asset and financial position of MVV Energie AG

Balance sheet

Euro 000s	**30 Sep 2022**	30 Sep 2021
Assets		
Non-current assets		
Intangible assets	341	389
Property, plant and equipment	543,035	507,588
Financial assets	1,733,828	1,521,040
	2,277,204	**2,029,017**
Current assets		
Inventories	865	280
Receivables and other assets	645,818	420,094
Cash and cash equivalents	939,093	744,056
	1,585,776	**1,164,430**
Deferred expenses and accrued income	510	653
	3,863,490	3,194,100
Equity and liabilities		
Equity		
Share capital	168,721	168,721
Capital reserve	458,946	458,946
Revenue reserves	599,884	551,857
Unappropriated net profit	69,202	69,202
	1,296,753	**1,248,726**
Income grants received	36,418	38,336
Provisions	104,204	89,738
Liabilities	2,423,112	1,815,942
Deferred tax liabilities	3,003	1,358
	3,863,490	**3,194,100**

Total assets increased year-on-year by Euro 669 million to Euro 3,863 million.

The asset side of the balance sheet is largely shaped by financial assets. At 30 September 2022, these totalled Euro 1,734 million, equivalent to a 45 % share of total assets. The figures for the previous year were Euro 1,521 million and 48 % respectively. The addition of Euro 213 million to financial assets was chiefly due to an increase in loans to associates. Property, plant and equipment increased year-on-year by Euro 35 million to Euro 543 million. This was mainly due to investments in transmission and supply grids for all utilities.

Current assets rose to Euro 1,586 million, up by Euro 422 million compared with 30 September 2021. This increase mainly resulted from the rise in liquid funds due to a year-on-year rise in the volume of margins received via MVV Trading for energy trading transactions. Furthermore, there were increases in trade receivables due to price rises, as well as in receivables from associates.

Equity grew by Euro 48 million in the year under report and stood at Euro 1,297 million at the balance sheet date. At 34 %, the equity ratio at 30 September 2022 was solid, but below the previous year's figure of 39 %. This was due to the sharp increase in total assets due to price movements.

Provisions rose by Euro 14 million in total to Euro 104 million, with this being due above all to higher other provisions. These related in particular to provisions stated in anticipation of highly likely pending losses in connection with the EU Regulation to tax surplus profits in the electricity sector. The increase is also due to higher provisions stated pursuant to the German Fuel Emissions Trading Act (BEHG).

Liabilities rose by Euro 607 million to Euro 2,423 million. The increase in liabilities chiefly resulted from higher liabilities to associates, which in turn particularly involved margins due to MVV Trading.

MVV Energie AG performs the financing function for its associates. In this capacity, it safeguards the operating liquidity of numerous companies and, in the form of shareholder loans, supplies these with the long-term capital they need for investments. An adequate volume of committed credit lines is available to secure liquidity.

2022 activity statements

With its 2022 activity statements, MVV Energie AG has satisfied its reporting obligations pursuant to § 6b of the German Electricity and Gas Supply Act (German Energy Industry Act – EnWG) and § 3 of the German Metering Point Operation Act (MsbG). In our internal financial reporting, we maintain separate accounts for the activities of electricity and gas distribution, for metering operations, for other activities within the electricity and gas sectors and for other activities outside the electricity and gas sectors.

Furthermore, we also prepare balance sheets and income statements for our electricity and gas distribution and our metering operations.

Electricity distribution

The electricity distribution activity field reported sales of Euro 45 million for the year under report (previous year: Euro 45 million). The gross performance for the 2022 financial year was thus at the previous year's level. In terms of total electricity sector sales of Euro 1,035 million (previous year: Euro 678 million), sales in the electricity distribution activity are of subordinate significance.

Alongside income from the leasing of its electricity grids to MVV Netze GmbH, earnings in the electricity distribution activity field at MVV Energie AG also include income from concession duties. MVV Netze GmbH manages and operates distribution facilities and grids at MVV Energie AG and is responsible for their maintenance. Other operating income resulting from the charging on of the concession duty to MVV Netze GmbH until 30 September 2022 was opposed by corresponding other operating expenses. The electricity distribution activity field generated annual net income of Euro 9 million in the 2022 financial year (previous year: Euro 9 million).

At 30 September 2022, total assets in the electricity distribution activity field came to Euro 160 million (previous year: Euro 153 million). This corresponds to a 26 % share of total assets in the electricity sector at MVV Energie AG (previous year: 50 %). Property, plant and equipment relating to electricity distribution increased compared with the previous year's balance sheet date. At Euro 149 million (previous year: Euro 142 million), this item accounted for a 93 % share of total electricity distribution assets (previous year: 93 %). On the equity and liabilities side of the balance sheet, electricity distribution liabilities rose from Euro 73 million to Euro 87 million. Liabilities to associates involve liabilities due to MVV Netze GmbH.

Metering operations (mME/iMSys)

Consistent with the unbundling requirements of § 3 (4) Sentence 2 MsbG with corresponding application of § 6b (3) EnWG, sales of Euro 0.8 million were reported for metering operations using modern measuring equipment and intelligent measuring systems in the year under report (previous year: Euro 0.6 million). Gross performance for the 2022 financial year therefore amounted to Euro 0.8 million. Measured in terms of total electricity sector sales of Euro 1,035 million (previous year: Euro 678 million), sales in the mME/iMSys metering operations activity field are of subordinate significance.

Earnings in the mME/iMSys metering operations activity field at MVV Energie AG include income from the leasing of its electricity meters (mME/iMSys).

Earnings were countered by depreciation of Euro 0.5 million on the electricity meters (mME/iMSys) recognised under non-current assets at MVV Energie AG (previous year: Euro 0.4 million). In the 2022 financial year, mME/iMSys metering operations posted an annual net deficit of Euro 414 thousand (previous year: annual net surplus of Euro 41 thousand).

At 30 September 2022, total assets in the mME/iMSys metering operations activity field stood at Euro 3.3 million (previous year: Euro 2.8 million), corresponding to a 0.5 % share of total assets in the electricity sector at MVV Energie AG (previous year: Euro 0.9 %). At the balance sheet date, property, plant and equipment relating to mME/iMSys metering operations amounted to Euro 3.3 million (previous year: Euro 2.8 million) and thus accounted for a 99 % share of total assets in the mME/iMSys metering operations (previous year: 99 %). On the equity and liabilities side, liabilities of Euro 2.2 million were reported for mME/iMSys metering operations (previous year: Euro 1.6 million). These mainly involve liabilities due to other activity fields.

Gas distribution

In the year under report, the gas distribution activity field reported sales of Euro 28 million (previous year: Euro 27 million). Gross performance was thus at the previous year's level. Compared with total gas sector sales of Euro 112 million (previous year: Euro 90 million), the gas distribution activity field is of subordinate significance. By analogy with electricity distribution, as well as income from leasing its grids to MVV Netze GmbH earnings in the gas distribution activity field also include income from concession duties. The other operating income resulting from charging on the concession duty to MVV Netze GmbH until 30 September 2022 was opposed by corresponding other operating expenses. The gas distribution activity field generated annual net income of Euro 5 million in the year under report (previous year: Euro 4 million).

Total assets in the gas distribution activity field amounted to Euro 136 million (previous year: Euro 125 million) at the balance sheet date on 30 September 2022 and accounted for some 74 % of total assets in the gas sector at MVV Energie AG (previous year: 80 %). At Euro 130 million, property, plant and equipment in gas distribution was Euro 11 million higher than in the previous year and made up 95 % of total assets in this activity field (previous year: 95 %). On the equity and liabilities side of the balance sheet, gas distribution liabilities rose from Euro 63 million to Euro 77 million. Liabilities to associates involve liabilities due to MVV Netze GmbH.

Corporate Governance Declaration (§ 289f, § 315d HGB)

Publicly listed companies are obliged under § 289f of the German Commercial Code (HGB) to submit a Corporate Governance Declaration. In this, they report on their latest Declaration of Compliance with the German Corporate Governance Code pursuant to § 161 of the German Stock Corporation Act (AktG) and on corporate governance practices applied over and above legal requirements. Furthermore, they report on the mode of operation of the Executive and Supervisory Boards, on the composition and mode of operation of the Supervisory Board committees and on the equal participation of women and men in management positions.

The Corporate Governance Declaration with the Declaration of Compliance will be published together with our Annual Report on 14 December 2022 on our website at **www.mvv.de/corporate-governance.**

Declaration pursuant to § 312 AktG

The Executive Board has compiled a report on relationships with associates for the 2022 financial year (dependent company report) pursuant to § 312 AktG: “MVV Energie AG received commensurate compensation for each of the transactions listed in its report on relationships with the City of Mannheim and associates based on the circumstances known to the Executive Board at the time at which the transactions were performed.”

Non-Financial Declaration (§ 315b, § 315c in conjunction with § 289b et seq. HGB)

The non-financial declaration for the 2022 financial year, which has been jointly compiled for MVV Energie AG and the MVV Energie Group (“MVV”), has been published as a combined non-financial declaration within the combined management report in this Annual Report.

Corporate Governance Declaration

MVV bases its actions on high-quality and transparent corporate governance, i.e. on the principles of responsible company management aimed at sustainable value creation. That is a standard we conscientiously aim to meet in all aspects and all areas of our company. That is why we promote close cooperation based on trust between the Executive and Supervisory Boards and employees, account for the interests of our shareholders and all other stakeholders in our decisions, strictly comply with applicable laws and structure our reporting and corporate communications transparently and openly. We are convinced that high-quality corporate governance strengthens the trust placed in our company by our shareholders, customers, business partners, employees and the general public.

The following Corporate Governance Declaration pursuant to § 289f and § 315d of the German Commercial Code (HGB) includes the Declaration of Compliance with the German Corporate Governance Code pursuant to § 161 of the German Stock Corporation Act (AktG), as well as those further disclosures on corporate governance at MVV Energie AG whose inclusion is either required by § 289f and § 315d HGB or recommended by the Code.

The Executive and Supervisory Boards of MVV Energie AG dealt extensively with the company's corporate governance in the 2022 financial year. The following Declaration of Compliance shows: MVV Energie AG complies with the Code's recommendations with just one exception. Our aim is to follow the recommendations and suggestions made by the Code as completely as possible in future as well.

Declaration of Compliance with the German Corporate Governance Code (§ 161 AktG)

The Executive and Supervisory Boards adopted the following Declaration of Compliance with the German Corporate Governance Code in September 2022:

The Executive and Supervisory Boards of MVV Energie AG hereby declare that the company complied and complies with the recommendations made by the German Corporate Governance Code Government Commission. For the past, this declaration refers to the version of the Code dated 16 December 2019 and published in the Federal Gazette on 20 March 2020. For the future, it refers to the version of the Code dated 28 April 2022 and published in the Federal Gazette on 27 June 2022.

No application was or is made of the following Code recommendation:

G.10: "Management Board members' variable remuneration shall be predominantly invested in company shares by the respective Management Board member or shall be granted predominantly as share-based remuneration. Granted long-term variable remuneration components shall be accessible to Management Board members only after a period of four years. Any benefits granted to Management Board members in a later year should be suitably explained in the remuneration report."

The remuneration system of MVV Energie AG **www.mvv.de/investors,** which was approved by a broad majority of shareholders at the Annual General Meeting on 12 March 2021, does not provide for any remuneration by ways of shares in the company, share ownership obligations or corresponding share-based remuneration models. Variable remuneration for the Executive Board is exclusively disbursed by way of cash payments. The remuneration system at MVV Energie AG nevertheless takes account of the interest of the company and its stakeholders in long-term, value-based and sustainable growth. The variable bonuses are based on the company's operating performance (adjusted EBIT) in the respective financial year and its average return on capital employed (ROCE) over a three-year period. Variable remuneration is disbursed when minimum thresholds specified in advance are exceeded. In particular, the link between variable remuneration and ROCE, and the development in this key figure over a three-year period, enables account to be taken of MVV's capital-intensive business and of the company's long-term performance. The ROCE measures how efficiently a company uses its capital and is, in our opinion, the most suitable key figure for assessing whether MVV has performed sustainably with its capital-intensive infrastructure and taken the right long-term strategic decisions. Furthermore, the shareholder structure of MVV Energie AG, above all its low level of free float and low share trading volumes, make it less appropriate to offer variable remuneration based on shares in the company or other share-based remuneration models.

Remuneration report and remuneration system

Although it is no longer part of the management report, the remuneration report prepared pursuant to § 162 AktG, including the audit opinion, forms a constituent component of the Annual Report. It is also published on our website at **www.mvv.de/investors** and, pursuant to the provisions of § 162 (4) will be available there for ten years. Moreover, on our website we have also published the Executive Board remuneration system pursuant to § 87a (1) and (2) Sentence 1 AktG, which was approved by the Annual General Meeting on 12 March 2021, and the most recent resolution adopted by the Annual General Meeting on 12 March 2021 in respect of the remuneration of Supervisory Board members pursuant to § 113 (3) AktG.

Shareholders and Annual General Meeting

The Annual General Meeting is where shareholders in MVV Energie AG exercise their voting and control rights. Each shareholder is entitled to participate in the Annual General Meeting if he or she registers within the relevant deadline and meets the requirements governing participation in the meeting and the exercising of voting rights. Shareholders may make statements on all agenda items at the meeting and submit relevant questions and motions. At the 2022 Annual General Meeting, which was held on an exclusively virtual basis due to the pandemic, due account had to be taken of the specific measures set out in greater detail below. For voting purposes, each share entitles its holder to one vote and voting is possible before or during the Annual General Meeting. Here, shareholders can cast their vote in a variety of ways: in person or via a proxy of their choice, by being represented by a voting proxy appointed by MVV Energie AG to act in line with their instructions, or by a bank or shareholders' association. Moreover, shareholders can submit their votes electronically in advance of the Annual General Meeting provided that they register within the relevant deadlines. Alternatively, they can communicate all declarations electronically using our password-protected shareholder portal that can be reached via our website **www.mvv.de/investors.**

As mentioned, due to the coronavirus pandemic we held the 2022 Annual General Meeting on a virtual basis. The meeting was broadcast live and in full length on our website and the web-based shareholder portal. Moreover, through to the end of voting shareholders were able to cast their votes via the shareholder portal. They were thus able to decide at very short notice as to how to cast their vote. The option of submitting questions about the agenda via the shareholder portal up to one day ahead of the Annual General Meeting was drawn on by large numbers of our shareholders. The questions thereby submitted were answered in full by members of the Executive and Supervisory Boards at the Annual General Meeting. This way, we were able to ensure a high-quality exchange of views with our shareholders in the virtual format as well.

Announced on 26 July 2022, the German Act on the Introduction of Virtual General Meetings of Stock Corporations has created a legal basis for holding virtual annual general meetings upon the expiry of the existing special regulations. We are currently reviewing the resultant options for holding our Annual General Meeting.

On our website at **www.mvv.de/investors** we publish all relevant documents for our Annual General Meeting in line with the requirements of stock corporation law. In particular, these include the invitation to the meeting and all reports and information needed for the resolutions.

Transparent and prompt communications

We aim to ensure a high degree of transparency and equal treatment of our shareholders in terms of their access to information. We have therefore set ourselves the standard of providing all stakeholders with simultaneous, equivalent and extensive information about material developments and about the company's situation. Our website, and here especially **www.mvv.de** and **www.mvv.de/investors,** serve as prompt sources of information. The information we publish on these sites includes our financial reports, our corporate governance declaration, the remuneration systems for members of the Executive and Supervisory Boards, the remuneration report, presentations from our analysts' conferences, press releases, ad-hoc announcements and our financial calendar.

Disclosures on auditor

The Annual General Meeting on 11 March 2022 elected PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, (PwC), Essen, as auditor for the 2022 financial year. Ahead of this, the Supervisory Board convinced itself of the auditor's independence. We comply with all statutory requirements resulting from the Audit Regulation and from § 316 et seq. HGB: from the selection, appointment, rotation of the auditor and of the persons responsible for managing the audit, through to commissioning the auditor to perform non-audit services.

Reporting and audit of financial statements

MVV Energie AG prepares its annual financial statements based on the requirements of the German Commercial Code (HGB). We prepare the consolidated financial statements and the interim financial statements in accordance with International Financial Reporting Standards (IFRS) in the form requiring application in the European Union. We present the situation of the MVV Group and of MVV Energie AG in a combined management report.

The auditor audits the annual financial statements of MVV Energie AG prepared by the Executive Board. Once the Audit Committee has discussed the financial statements, they are examined, approved and thus adopted by the Supervisory Board. The consolidated financial statements prepared by the Executive Board and audited by the auditor are also presented to the Supervisory Board for its own review and approval once they have previously been examined in detail by the Audit Committee. Furthermore, in its audit of the financial statements the auditor also audits the combined management report.

The quarterly statements for the first three months and first nine months are prepared by the Executive Board and discussed with the Audit Committee prior to publication, as is the half-year financial report. These documents are not subject to any review requirements by the auditor.

The combined non-financial declaration is subject to a limited assurance audit based on International Standards on Assurance Engagements ISAE 3000 (revised).

Compliance and risk management

We have set ourselves the standard of ensuring that our dealings with all our stakeholders are characterised by trust, fairness and integrity. Our compliance management system (CMS) supports us in safeguarding compliance with applicable laws, as well as with in-company guidelines and the ethical standards to which we are committed. The CMS is intended on the one hand to ensure that our managers and employees understand and adhere to these guidelines and standards and on the other hand to monitor all relevant business activities and processes within our Group.

We have summarised the most important requirements and necessary organisational structures and processes in our Compliance Management Handbook. This also lists the names of those employees who are responsible for our reporting system and describes the relevant processes in detail. The handbook is binding for all companies at the Mannheim subgroup of MVV Energie AG and is permanently available for downloading to all employees at this subgroup. The other subgroups have introduced equivalent compliance management systems.

MVV's Compliance Officer is responsible for our CMS with regard to its contents, organisation and processes. He compiles the relevant compliance regulations, updates these, and exchanges information with the various organisational units involved. He documents the regulations and ensures that they are implemented within business processes. Moreover, he is responsible for ensuring that employee training measures are implemented and that all CMS processes are adhered to. Furthermore, he acts in an advisory capacity to support measures intended to prevent and, where necessary, investigate any violations of the law, corruption or deliberate acts harmful to the company. The Compliance Officer reports to the Executive Board regularly and whenever otherwise required by specific developments, as well as to the Audit Committee in the context of the annual financial statements.

We have structured our CMS in such a way that any breaches of compliance are avoided on a preventative basis, particularly by implementing preventative measures in the respective business processes (systemic compliance). We perform advance checks on relevant processes in sensitive areas, for example, and act early to take corrective measures where necessary. Donations and payments to parties and political organisations are strictly prohibited. Payments to equity providers exclusively take the form of dividends.

We rely on active prevention measures within the actual business processes already in order to avert criminal or grossly improper violations of the law. Here, we pursue a zero-tolerance policy towards bribery and all other forms of corruption. With regard to corruption prevention, we provide extensive training to our employees, particularly those working in sales, related areas and procurement. We show them, for example, how to deal with gratuities and invitations, which we record and check. With these measures, we minimise the risk of so-called soft bribery. We likewise continually monitor all business fields, specialist divisions, group departments and subsidiaries to ascertain whether compliance requirements have been observed. Moreover, employees and third parties can contact the Compliance Officer or an external confidence lawyer directly via anonymous "whistle-blower" hotlines and thus provide tip-offs of potential misconduct. Among other places, the telephone number of the confidence lawyer is also published on our website at **www.mvv.de.**

Apart from a low number of minor incidents, no compliance-related infringements were detected in the period under report.

Regular training is provided to all of MVV's managers and employees who have contact to customers, service providers or suppliers to ensure that they are extensively informed of general compliance requirements and also familiar with the legal requirements relevant to their respective business units. Examples of the topics covered by this training are combating corruption and money laundering, capital market, stock market, competition and cartel law, handling sanction lists and the relevant requirements of energy industry law. In the 2022 financial year, 373 employees at the Mannheim subgroup and 441 employees at the other subgroups took part in this training.

Due to the coronavirus pandemic, most training sessions were still held as video conferences rather than in person. In parallel, 2,615 individuals completed an e-learning programme in the same period that was offered by our Stadtwerke Kiel and Energieversorgung Offenbach subsidiaries and the Juwi subgroup. All managers from a specific management level upwards are required to submit a Compliance Management Declaration (CMD) at the end of each financial year. The same requirement applies to the managing directors of our subsidiaries and select other shareholdings. In this, they must state whether all relevant compliance regulations and legal requirements have been complied with. Among others, the questions in the CMD include asking whether the employees of the individual manager have received the required instruction and suitable training for the CMS. Moreover, in the context of the CMD the managers also provide detailed responses to questions specifically tailored to circumstances at their respective business unit.

We take all measures necessary to prevent money laundering and terrorism financing. Given its products, customer base and geographical areas of activity, MVV is only exposed to a low potential risk in this respect. To eliminate the risk of participating in money laundering and terrorism financing entirely, cash transactions are prohibited without exception. In addition, when business relationships are established requirements have to be met in terms of identifying the contract partners and their economic beneficiaries. To ensure that we do not maintain any business relationships with individuals who are subject to sanctions, we regularly deploy an IT tool to compare our business partners with the relevant sanction lists.

The energy industry supply chain is greatly influenced by fuel trading, which is handled on energy exchanges or in bilateral agreements. A significantly lower share of our total procurement volumes relates to suppliers who provide us with goods or perform services for us. Compliance has high priority for us in our cooperation with these suppliers as well. We use supplier management systems and require all suppliers to commit to our compliance regulations, particularly those relating to anti-corruption measures, environmental protection, respect for human rights in the supply chain and social responsibility. We base our cooperation with suppliers and service providers in Germany and the European Union on applicable laws and regulations, including the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (LkSG), which will apply to us from 1 January 2023, as well as on those compliance regulations, forms of conduct and work practices relevant to us. Among others, these comprise the international conventions of the United Nations (UN), the International Labour Organization (ILO) and the Organisation for Economic Cooperation and Development (OECD), as well as the UN Global Compact. We agree with our suppliers that they will comply with our Compliance Code of Conduct and our Suppliers Code of Conduct, both of which are published on our website **www.mvv.de/zentraleinkauf.** Our suppliers undertake to comply with legal requirements and internationally recognised standards governing anti-corruption measures, the protection of human and workers' rights and environmental protection. If these obligations are breached, then contractual sanctions, including contractual penalties, termination and damages payments, are provided for. To implement the requirements of the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (LkSG), we have initiated a group-wide project in which we will be introducing an AI-based risk analysis process and establishing supplier risk management connected to this. This will enable us to avoid, terminate or minimise any violations by our suppliers of human rights and/or human rights-related environmental protection requirements. The process already accounts for the requirements contained in the draft version of the EU Corporate Sustainability Due Diligence (CSDD) Directive.

Further key components of our corporate management are our risk management system (RMS) and our internal control system in respect of the financial reporting process (IKS). Our RMS is structured to enable us to detect financial and non-financial opportunities and risks at an early stage and thus assess the potential implications for our adjusted EBIT. Opportunities may result in a positive variance in our company earnings compared with the budget values, while risks may produce a negative variance. We evaluate opportunities and risks at the Group on the basis of in-depth analyses of the market and competition. If possible, we reduce our risks or, if they are of a commercial nature, pass them on to third parties. To this end, we develop suitable measures and monitor their implementation. Our IKS covers relevant accounting and financial reporting processes at all major locations. The aim is to minimise those risks that might contravene our objective of ensuring correct, complete, prompt and understandable financing reporting. To this end, we regularly analyse all processes and interfaces involved in preparing the consolidated financial statements, the financial statements of MVV Energie AG and the combined management report of MVV.

Dual management system

As a listed stock corporation with its legal domicile in Mannheim, MVV Energie AG is governed by the requirements of German stock corporation law. One basic principle set out therein is the dual management system, which requires strict separation between the Executive and Supervisory Boards in terms of their composition and function. The Executive Board is responsible for managing the company and conducting its business, while the Supervisory Board is entrusted with advising and monitoring the Executive Board. The Executive and Supervisory Boards of MVV Energie AG work together closely and on a basis of trust in the interests of the company.

Composition and mode of operation of Executive Board

The Executive Board manages the company under its own responsibility with the objective of generating sustainable and profitable growth. It lays down the company's strategic alignment and determines its financial, investment and personnel planning. It reviews whether the strategic alignment is being implemented effectively and whether the risk management system is appropriate. Furthermore, it monitors risk controlling, the internal control system in respect of the financial reporting process (IKS) and the compliance management system, as well as more far-reaching decentralised management and control systems. It takes due account of the interests of the company's stakeholders in its decisions.

The activities of the Executive Board are governed by a Code of Procedure issued by the Supervisory Board. This lays down divisional responsibilities, as well as those tasks and decisions incumbent on the overall Executive Board. Furthermore, it defines the responsibilities of the Chief Executive Officer (CEO), the ways in which the Executive Board adopts resolutions and the transactions requiring Supervisory Board approval. Pursuant to the Articles of Incorporation, the Executive Board must have at least two members. It currently comprises four positions: CEO/Commercial Affairs, Technology, Sales and Personnel.

The CEO coordinates the work within the Executive Board. He also represents the Executive Board externally. Apart from this, Executive Board members enjoy equal rights and bear joint responsibility for managing the company. Each member of the Executive Board manages their division under their own responsibility but nevertheless subordinates the specific interests of the division to the overriding interests of the company. Due to the sickness-related absence of the CEO, his duties were temporarily assigned to the other members of the Executive Board. The Technology Director was responsible for coordinating Executive Board business during the absence of the CEO. The head of the Tax and Accounting department was appointed as a deputy member of the Executive Board and assumed responsibility for commercial affairs.

Diversity concept for composition of Executive Board

The diversity concept adopted by the Supervisory Board in 2020 for the composition of the Executive Board is based on MVV's entrepreneurial approach. Together with the Executive Board, the Supervisory Board ensures that long-term succession planning is in place. The Executive Board of MVV Energie AG should be composed in such a way that qualified leadership, control and business management is at all times ensured for MVV Energie AG and the MVV Group. Candidates for the Executive Board of MVV Energie AG therefore have to be able to correctly assess the economic situation and technical framework of a listed energy supplier with municipal roots and successfully shape its sustainable development. On an individual level, Executive Board members are not expected to have the full range of specialist skills, competencies and experience that are specifically required. Overall, their qualities should nevertheless complement each other in such a way that the Executive Board as a whole has the necessary expertise and a suitable breadth of experience. Executive Board members bear joint responsibility for managing the company and the Group. In view of this, they must have sufficient expertise for mutual supervision and deputisation.

When concluding employment contracts, an upper age limit of 65 years should be complied with. The term of first-time appointments should not exceed three years.

In 2017, the Supervisory Board set itself the objective of raising the share of women on the Executive Board and laid down a target of 25 % to be reached by 30 September 2021. With the appointment of Verena Amann to the Executive Board, this target was met as of 1 August 2019 and thus two years earlier than planned. The share of women on the Executive Board thus already meets the quota for women on the management boards of listed companies set by § 76 (3a) AktG for appointments after 1 August 2022 in cases where the respective management board has more than three members. With the temporary appointment of

Daniela Kirchner as a deputy member of the Executive Board as of 1 January 2022, the share of women on the Executive Board increased to 40 %.

The CVs of Executive Board members have been published on our website at **www.mvv.de/investors** to provide information about their experience, expertise and skills.

Composition and mode of operation of Supervisory Board and its committees

The Supervisory Board advises the Executive Board in its management of the company and supervises its activities. Its responsibilities also include appointing and dismissing members of the Executive Board. The Executive Board must involve the Supervisory Board in all decisions that are of fundamental significance for the company. In view of this, the Executive Board provides the Supervisory Board with regular, prompt and comprehensive information about the strategy and other fundamental matters of corporate planning. Moreover, the Executive Board regularly reports to the Supervisory Board on the business performance, major transactions and situation of the company, as well as on its risk situation and risk management.

The Supervisory Board of MVV Energie AG comprises 20 members, of which ten shareholder representatives and ten employee representatives. Their terms in office are identical. Eight of the shareholder representatives are elected by the Annual General Meeting, while two, namely the Lord High Mayor and the relevant specialist head of department, are directly delegated by the City of Mannheim. This provision is applicable for as long as the City of Mannheim is a shareholder and, directly or indirectly, holds shares corresponding to more than half of the company's share capital. Employee representatives are elected by the company's employees in accordance with the German Codetermination Act (MitbestG). The Chairman of the Supervisory Board, the Lord High Mayor of the City of Mannheim Dr. Peter Kurz, coordinates the work of the Supervisory Board, whose activities are governed by a Code of Procedure. We have published the Code of Procedure for the Supervisory Board on our website at **www.mvv.de/investors.**

To structure its activities efficiently, the Supervisory Board of MVV Energie AG has formed five specialist committees. The members of these committees are each particularly qualified in terms of their specialism. The Audit Committee meets regularly, and at least five times a year, while the Personnel, Nomination, Mediation and New Authorised Capital Creation Committees are only convened when necessary.

The **Audit Committee** addresses the corporate planning, strategy and the performance of individual business fields, as well as the development and structure of individual controlling systems. It also deals with fundamental financial reporting issues. Its responsibilities include preparing the selection of the auditor, reviewing and discussing the annual and consolidated financial statements in advance and preparing corresponding resolutions for the full Supervisory Board, as well as discussing the interim consolidated financial statements for the first half and the interim financial statements for the first three and first nine months with the Executive Board. The committee further monitors the effectiveness of the internal control system (IKS) and the internal audit and risk management system. It checks whether the organisational precautions taken are sufficiently effective to ensure compliance with legal requirements and internal company guidelines (compliance). Further tasks incumbent on the Audit Committee include determining key audit focuses and setting thresholds for the commissioning of non-audit services. The Audit Committee consists of three shareholder representatives and three employee representatives. At 30 September 2022, the committee had the following members: Dr. Lorenz Näger (Chairman), Heike Kamradt-Weidner (Deputy Chairwoman), Angelo Bonelli, Detlef Falk, Martin F. Herrmann and Gregor Kurth. The Audit Committee members meet the requirements of § 100 (5) and § 107 (4) 4 AktG, which state that at least one member of the committee should have accounting expertise, at least one further member should have auditing expertise, and that the members as a whole should be familiar with the sector in which the company operates. All members of the Audit Committee have accounting expertise and, with the exception of Angelo Bonelli, auditing expertise. All committee members are independent pursuant to the definition in C.10 of the Code. The Supervisory Board Chairman, Dr. Peter Kurz, the First Mayor of the City of Mannheim, Christian Specht, and the Supervisory Board member Dr. Stefan Seipl attend Audit Committee meetings as permanent guests.

The **Personnel Committee** focuses in particular on preparing any Supervisory Board resolutions which relate to the conclusion, amendment or rescission of employment contracts with Executive Board members. It proposes suitable candidates to the Supervisory Board for appointments to the Executive Board. In this, it takes due account of legal requirements, the diversity concept adopted by the Supervisory Board for the Executive Board and the recommendations made by the German Corporate Governance Code. The Supervisory Board as a whole is responsible for appointing new members to the Executive Board subsequent to preparation of the decisions by the Personnel Committee, as well as for decisions relating to existing employment contracts. When selecting new Executive Board members, the Supervisory Board develops and deploys current requirement profiles based on the diversity concept for the composition of the Executive Board. The Personnel Committee comprises six members: the Supervisory Board Chairman, who is also Personnel Committee Chairman, his deputy and four Supervisory Board members, of which two shareholder and two employee representatives. The Personnel Committee had the following members at 30 September 2022: Dr. Peter Kurz (Chairman), Heike Kamradt-Weidner (Deputy Chairwoman), Angelo Bonelli, Barbara Hoffmann, Gregor Kurth and Andreas Schöniger.

The responsibilities of the **Nomination Committee** involve recommending suitable candidates to the Supervisory Board for its own proposals to the Annual General Meeting. When selecting candidates, the committee takes particular account of legal requirements, the diversity concept adopted by the Supervisory Board, including the competency profile, and the recommendations of the German Corporate Governance Code. Furthermore, it compiles targets for the composition of the Supervisory Board. The six committee members include the Supervisory Board Chairman, who also chairs the committee, and five further shareholder representatives. The Nomination Committee had the following members at 30 September 2022: Dr. Peter Kurz (Chairman), Barbara Hoffmann, Gregor Kurth, Dr. Lorenz Näger, Tatjana Ratzel and Thorsten Riehle. Christian Specht attends the meetings of the Nomination Committee as a permanent guest.

Pursuant to § 27 (3) of the German Codetermination Act (MitbestG), the **Mediation Committee** submits further personnel proposals to the Supervisory Board if the two-third majority required to appoint and dismiss Executive Board members is not achieved in the first ballot. The Mediation Committee had the following members at 30 September 2022: Dr. Peter Kurz (Chairman), Heike Kamradt-Weidner, Gregor Kurth and Andreas Schöniger.

The **New Authorised Capital Creation Committee** is charged with exercising the powers of the Supervisory Board in connection with any capital increase based on authorised capital. This committee comprises eight members: the Supervisory Board Chairman, who chairs the committee, his deputy and six further Supervisory Board members, of which one employee and five shareholder representatives. The New Authorised Capital Creation Committee had the following members at 30 September 2022: Dr. Peter Kurz (Chairman), Heike Kamradt-Weidner, Gregor Kurth, Dr. Lorenz Näger, Tatjana Ratzel, Thorsten Riehle, Andreas Schöniger and Christian Specht.

Diversity concept for composition of Supervisory Board

The diversity concept adopted by the Supervisory Board in 2020 and the specialist and personal requirements it sets out for the Supervisory Board are intended both to ensure a transparent and systematic selection process for new Supervisory Board members and to provide a suitable and well-balanced composition for the Board as a whole. The aim is for the Supervisory Board of MVV Energie AG, as is the case in its current composition, to be able at all times to provide qualified supervision and advice to the Executive Board in its activity on behalf of MVV. Candidates for the Supervisory Board of MVV Energie AG must be able to correctly assess the economic situation and technical context of a listed energy supplier with municipal roots and to successfully accompany its sustainable development. Individual Supervisory Board members are not expected to have the full range of specific specialist skills, competencies and experience required. However, their qualities should complement each other in such a way that the full Board has the competence and experience needed for it to perform the duties incumbent on the Supervisory Board and its committees.

Furthermore, the Board must include an adequate number of members with the qualifications called for by the German Stock Corporation Act (AktG) and the German Corporate Governance Code. The Supervisory Board should also include an adequate number of independent members.

Proposals for candidates should take due account of an upper age limit of 70 years. As a rule, this limit should also not be exceeded during the term in office.

The specialist and personal requirements stipulated in the diversity concept for the Supervisory Board are satisfied in the board as a whole and summarised in the qualification matrix provided below pursuant to C.1 of the German Corporate Governance Code.

Satisfaction of diversity and competence requirements FY 2022 (Number of Supervisory Board members)

Area of competence	Energy industry technical	Energy industry commercial	Company management	Renewable energies	International markets	Accounting and controlling	Auditing	Law	Municipal affairs	Human resources	Digital transformation	Sustainability and system transformation
Core competence	9	9	14	8	9	12	10	9	11	14	10	10
Secondary competence	7	9	6	11	5	7	7	9	8	5	9	10

The Supervisory Board of a listed company is required by § 96 (2) Sentence 1 AktG to comprise at least 30 % women and at least 30 % men. Pursuant to § 96 (2) Sentence 2 AktG, this requirement basically applies for the overall Supervisory Board. At MVV Energie AG, however, both the employee and the shareholder representatives on the Supervisory Board have exercised the option provided for in § 96 (2) Sentence 3 AktG, namely of deciding that these minimum shares should be met not only for the Supervisory Board as a whole, but also for employee and shareholder representatives respectively. This means that, of positions allocable to shareholder and employee representatives, at least three for each group must be held by women and at least three by men. This requirement was met in the period under report.

The responsibilities of the Nomination Committee include implementing the diversity concept for the composition of the Supervisory Board. It proposes suitable shareholder representative candidates to the Supervisory Board for its election proposals to the Annual General Meeting. In this, it also takes due account of legal requirements and of the recommendations made by the German Corporate Governance Code. Before nominating a proposed candidate, the Supervisory Board checks whether the potential candidate has sufficient time at his or her disposal to discharge the duties involved and whether he or she has any business and/or personal links to the group of companies or any of its competitors. The selection of employee representatives for Supervisory Board positions is governed by the provisions of codetermination law.

The composition of the Supervisory Board changed in the 2022 financial year. Jürgen Wiesner, an employee representative on the Supervisory Board, stood down from his position as of 30 April 2022. He was succeeded by Andreas Schöniger, who joined the Supervisory Board as of 1 May 2022.

Information about the experience, expertise and skills of our Supervisory Board members can be found in their CVs as published on our website at **www.mvv.de/investors.**

We conducted the self-assessment recommended by the Code with regard to the efficiency of the work performed by the Supervisory Board and its committees with support from an external consultant in the 2022 financial year. The results were presented to the Supervisory Board and discussed. Overall, members assess the work performed by the full Supervisory Board and its committees as highly efficient. We have acted on the feedback received. The next assessment is scheduled for the 2024 financial year.

Conflicts of interest and independence of Supervisory Board members

Conflicts of interest on the part of Executive or Supervisory Board members must be disclosed to the Supervisory Board immediately. In its report to the Annual General Meeting, the Supervisory Board provides information as to whether any such conflicts arose and, if so, how these were addressed.

In respect of Points C.1 and C.6 et seq. of the German Corporate Governance Code in its version dated 28 April 2022, we are of the opinion that all members of our Supervisory Board were and are independent in the spirit of the Code. A Supervisory Board member is considered independent if he or she is independent of the company and its Executive Board and independent of any controlling shareholder. This is the case for all Supervisory Board members. We also view Supervisory Board members who sit on the city council or work for the city administration and are delegated by the City of Mannheim as independent in this sense. The City of Mannheim owns a majority of the shares in MVV Energie AG. Pursuant to the Municipalities Code of the State of Baden-Württemberg, the city council is the topmost political body representing the city. In view of this, it is logical that the City of Mannheim, as the majority shareholder in MVV Energie AG, should be represented on the company's Supervisory Board by members of the city council and city administration. When determining independence, the decisive factor is whether there are any material conflicts of interest that are not only of a temporary nature. This is particularly not the case for Supervisory Board members appointed in accordance with the Articles of Incorporation, namely Dr. Peter Kurz and Christian Specht. The same is true of the other Supervisory Board members who sit on the city council or did so in the 2022 financial year.

Even if a different view is taken of the independence of those Supervisory Board members who are simultaneously members of the city administration or city council of the City of Mannheim, the Supervisory Board nevertheless certainly includes what is, according to C.9 of the German Corporate Governance Code, an appropriate number of independent members, namely Sabine U. Dietrich, Martin F. Herrmann, Barbara Hoffmann, Gregor Kurth, Dr. Lorenz Näger, Tatjana Ratzel and Dr. Stefan Seipl.

Some of our Supervisory Board members have been members for more than twelve years. These are Dr. Peter Kurz (since 2007) and Christian Specht (since 2005), who are shareholder representatives delegated to the Supervisory Board in accordance with the Articles of Incorporation, and Detlef Falk (since 2007) and Johannes Böttcher (since 2006) as employee representatives. Despite the length of their membership, based on their work to date the Supervisory Board does not have any doubts as to their independence of the company and its Executive Board.

Report on equal participation of women and men

The Supervisory and Executive Boards of MVV Energie AG firmly believe that the company can generate sustainable business success only if responsibility is assigned to women and men on a basis of equality. Not least in view of demographic change, it makes sense for both social and economic reasons to promote all talents regardless of their gender. Among others, this approach also has the benefit of proactively countering the effects of any shortage of specialist and management staff. To date, women have only made up a comparatively low share of the overall workforce at companies operating in the energy sector. The Supervisory and Executive Boards of MVV Energie AG believe that increasing the share of women working at the group of companies on a long-term basis is one key to the company's successful further development. We have therefore set ourselves the target of raising women's share of our Group's workforce to 35 % by 30 September 2026, up from 28 % at 30 September 2022. Among our management staff, we also aim to increase the share of women to 25 %; at the balance sheet date on 30 September 2022, this share stood at 16 %. To achieve our targets by 2026, we will consistently implement our promotional measures and programmes and further expand these in the years ahead. That is particularly true for our targeted personnel development activities for women who have the potential to take on management positions.

For MVV Energie AG, we report on the share of women in the first and second management tiers below the Executive Board. In September 2021, the Executive Board set targets for the share of women at 25 % for the first and 30 % for the second management tiers, with both targets to be reached by 30 September 2026. The share of women in the first management tier amounted to 18 % at 30 September 2022 and was thus ahead of the previous year (30 September 2021: 14 %). In the second management tier, the share of women amounted to 22 % (30 September 2021: 31 %) and thus fell short of the target level set. We see the share of women in the first management tier as offering an improved basis for meeting our target and will have to further step up our internal efforts to raise the share in the second management tier. In addition to those measures that are already in place to promote women, we are taking steps to increase the number of applications we receive from promising external and internal women candidates.

Takeover-Related Disclosures

The combined management report includes takeover-related disclosures pursuant to § 289a (1) and § 315a (1) of the German Commercial Code (HGB). The Executive Board has examined these disclosures and offers the following explanatory comments:

Composition of share capital

At the balance sheet date on 30 September 2022, the company's share capital totalled Euro 168,721,397.76 and was divided into 65,906,796 individual non-par registered shares with a prorated amount in the share capital of Euro 2.56 per share. Each share entitles its holder to exercise one vote at the Annual General Meeting of MVV Energie AG, as well as to the rights and obligations accruing to it by law and the Articles of Incorporation.

Restrictions on voting rights and transferability; shares with special rights

As far as we are aware, the City of Mannheim as the majority shareholder and its subsidiaries MKB Mannheimer Kommunalbeteiligungen GmbH and MV Mannheimer Verkehr GmbH on the one hand and FS DE Energy GmbH and its material shareholders, FS Energy TopCo S.à r.l. and First Sentier Investments International IM Limited on the other hand concluded a shareholders' agreement on 2 April 2020. This includes understandings concerning proposals for the composition of the Supervisory Board; apart from this, it excludes any other voting pacts and acknowledges that MVV Energie AG should continue to be a company controlled by the City of Mannheim. The shareholders' agreement also includes understandings concerning the transfer of shares. In particular, certain MVV shares may only be sold by FS DE Energy GmbH prior to 1 January 2029 with the approval of the City of Mannheim. There are no shares with special rights conferring powers of control.

Direct or indirect shareholdings exceeding 10 % of voting rights

The City of Mannheim indirectly held 50.1 % of the share capital and voting rights in MVV Energie AG at the balance sheet date; FS DE Energy GmbH, an indirect subsidiary of a fund managed by First Sentier Investors, directly held 45.08 % of the share capital and voting rights. These disclosures are based on the voting right notifications provided to us by shareholders and the entries in the Share Register.

Control of voting rights

There is no control of voting rights as defined in § 289a (1) No. 5 and § 315a (1) No. 5 HGB.

Regulations for appointing and dismissing Executive Board members and to amend Articles of Incorporation

The appointment and dismissal of Executive Board members is based on § 76 et seq. of the German Stock Corporation Act (AktG), and especially on § 84 AktG and § 30 et seq. of the German Codetermination Act (MitbestG). In line with the Articles of Incorporation, the company's Executive Board consists of at least two members. The Supervisory Board is responsible for determining the number of members and for appointing and dismissing members. Members are appointed for a maximum five-year term, with repeated appointments permitted.

Amendments to the Articles of Incorporation must be undertaken in accordance with § 133 and § 179 AktG in conjunction with § 19 of the Articles of Incorporation. Pursuant to § 19 (1) of the Articles of Incorporation, a simple majority of the share capital with voting entitlement participating in the adoption of a resolution is also sufficient to amend the Articles of Incorporation, unless mandatory legal provisions require a larger majority. Pursuant to § 11 (3) of the company's Articles of Incorporation, the Supervisory Board is authorised to adopt amendments to the Articles of Incorporation that only affect the wording.

Executive Board powers to issue and buy back shares

By resolution on 13 March 2020, the Annual General Meeting authorised the Executive Board until 12 March 2025 to acquire treasury stock up to an amount of 10 % of existing share capital upon adoption of the resolution. By resolution on 8 March 2019, the Annual General Meeting also authorised the Executive Board until 7 March 2024, subject to approval by the Supervisory Board, to raise the share capital by a total of up to Euro 51.2 million by issuing up to 20 million new individual non-par registered shares on one or several occasions in return for cash and/or non-cash contributions. The Executive Board of MVV Energie AG has not yet made use of either of these authorisations.

Compensation agreements and change of control clauses

MVV Energie AG has no material agreements that are subject to a change of control due to a takeover bid (change of control clauses). The company also has not concluded any compensation agreements with Executive Board members or employees for the event of a takeover bid.

Outlook, Opportunity and Risk Report

» Ongoing great uncertainty in overall economy and energy industry
» Increased volatility on energy and procurement markets
» From operating perspective, earnings expected to at least match previous year's figure
» Investments set to remain high

OUTLOOK

Macroeconomic developments

The consequences which the war in Ukraine will continue to have for economies and individual companies can only be assessed to a limited extent. In their "Autumn Joint Forecast" for the 2022 calendar year, Germany's leading economic institutes expect gross domestic product to rise by 1.4 %. The German economy had been severely affected by the critical escalation on gas markets. The rapid rise in gas prices had drastically raised energy costs and had resulted in a massive reduction in purchasing power within the overall economy. This was not only holding back the still incomplete recovery from the coronavirus crisis, but was also expected to force the German economy into recession. The researchers expect gross domestic product to contract by 0.4 % in the 2023 calendar year.

Business framework

Alongside macroeconomic developments, MVV's future business performance will particularly be determined by the regulatory and competitive framework in Europe and Germany. One key factor on European level will be the resolutions adopted in the second part of the "Fit for 55" package. In Germany, further reforms to the Renewable Energies Act (EEG), programmes to promote green heat options, the implementation of the Coal Exit Act (KAG) and the amendment to the Building Energy Act (GEG) will play an important role. Further information about this can also be found in the chapter Business Framework. These conditions may at times be overridden by short-term legislative measures to further manage the consequences of the war in Ukraine.

With rapid movements in prices, energy and procurement markets became significantly more volatile in the past year. This factor will also create uncertainties for MVV in the 2023 financial year. Further information about this can be found in the chapter Business Framework. Moreover, we expect competitive pressure to remain unrelentingly high in future as well.

Overall summary of expected business performance

We issue our forecast for the 2023 financial year against a backdrop of great uncertainty in the overall economy and the energy industry. Like the energy industry, MVV will also be affected by increased volatility on the energy and procurement markets, changes in energy and climate policy and regulatory interventions.

Our strategic alignment will receive tailwind from national and international climate protection efforts and legislative initiatives. To accelerate decarbonisation, we are investing consistently in further expanding renewable energies, green heat, boosting energy efficiency and developing innovative products and services. At the same time, we are taking measures to enhance our processes and reduce our costs. This way, we are providing MVV with a foundation for sustainable and profitable growth in future as well.

At the current point in time, we cannot quantify the implications for our company of further developments on the energy and procurement markets and of changes in energy policy to the customary extent. This has also led to changes in MVV's opportunity/risk profile. We comment on the Opportunity/Risk Profile in our opportunity and risk report.

In periods of volatility, the development in our adjusted sales is influenced by changes in market prices between the time at which forward sales transactions are concluded and the performance date. The greater the movement in prices, the more volatile the adjusted sales forecast becomes. Due to opposing items for forward sales transactions in the adjusted cost of materials, this volatility does not affect adjusted EBIT. As these opposing items in adjusted sales and adjusted cost of materials can only be planned to a limited extent on an individual level, in future we will no longer issue forecasts for the adjusted sales of the MVV Group and MVV Energie AG. This key figure is not relevant to our management of the company.

Group earnings performance

Due to our business model, our earnings performance is dependent in particular on weather conditions and wind volumes, wholesale prices on energy markets, waste and biomass prices, procurement costs for fuels and CO_2 emission rights, availability levels at our plants and the development in market conditions and the competitive climate. Moreover, the development and marketing of photovoltaics and wind projects are generally characterised by high volatility. In view of the current situation, alongside the factors listed above our expectations in respect of our adjusted EBIT depend above all on the further development in conditions on the energy markets, as well as on these factors, together with the consequences of the geopolitical situation, not restricting the availability of commodities or impairing supply chain integrity. Overall, from an operating perspective we are confident that adjusted EBIT will at least match the previous year's level of adjusted EBIT excluding disposal gains (Euro 298 million). Any reduction in the scope of risks pertaining to procurement, receivables default, plant availability, price developments and the competitive situation in the course of the financial year may provide opportunities to achieve earnings growth.

If possible, we will issue more specific statements on our earnings forecast in the financial reports published during the financial year.

Earnings performance of MVV Energie AG in separate financial statements

For the 2023 financial year, we expect the annual net income after taxes of MVV Energie AG to approximately match the previous year's figure (Euro 117 million). Earnings in the separate financial statements are influenced in particular by weather conditions, grid operations, the sales business and income from group shareholdings.

Dividend

We aim to pay a dividend to our shareholders that is aligned to MVV's earnings performance in future as well. In view of this, the Executive Board has decided to propose a dividend of Euro 1.05 per share again for approval by the Annual General Meeting on 10 March 2023 (previous year: Euro 1.05 per share). The Supervisory Board will decide in December 2022 on its dividend proposal to be submitted to the Annual General Meeting.

Investments

From a current perspective and provided that developments in the overall economy and the energy industry permit, our investments in the 2023 financial year will be at around the previous year's level (Euro 335 million) and will have mainly unchanged focuses.

Capital resources and financing structure

Thanks to our ongoing very good access to the capital markets, we are able to cover our financing and liquidity needs at all times. Our adjusted equity ratio of around 27 %, or around 34 % excluding security deposits for counterparty default risks (margins), enables us to continue making high volumes of investment. We finance our investments in the existing business primarily from depreciation. For growth projects, we draw on retained earnings and on optimised project-based financing facilities. We pool projects with structural similarities and comparable terms and then finance these via the capital market. We draw here on the bank and promissory note loan markets. By adhering to key figures as guidelines for debt-financed growth, we ensure an implicit rating for MVV that is stably on investment grade level.

Forward-looking statements and forecasts

Our combined management report for MVV (IFRS) and MVV Energie AG (HGB) includes forward-looking statements that are based on current assumptions and estimates. Although the Executive Board is convinced that these assumptions and budgets are accurate, actual future developments and actual future earnings may deviate from these forecasts.

OPPORTUNITY AND RISK REPORT

The energy industry has been undergoing a process of fundamental change for years now – and this has recently intensified due to national and international climate protection targets and geopolitical crises. MVV is actively shaping this transformation: With our “Mannheim Model”, we will be one of the first energy companies in Germany to become climate positive. This process will be driven by the components of heat transition, electricity transition and our actions as partners to our customers. Further details about this can be found in the chapter Corporate Strategy.

The uncertainties accompanying a transformation on this scale have increased for our industry as a whole and also for MVV due to the war in Ukraine.

The opportunities and risks which describe these uncertainties have always formed part of our entrepreneurial activity. One key task for our corporate management, now more than ever, involves identifying both at an early stage of developments, exploiting opportunities and countering risks with suitable measures. We have installed suitable instruments and processes for this purpose. On the one hand, these include our internal control system (IKS) in respect of the financial reporting process, which serves to ensure correct, reliable and uniform companywide financial reporting. On the other hand, they also include our risk management system (RMS), with which we record developments relevant to our company at an early stage, and in particular those relating to competitive and regulatory developments, as well as to changes in technologies. Systematically factoring opportunities and risks into our entrepreneurial activities enables us to safeguard and further extend MVV’s competitiveness.

Explanation of internal control system (IKS)

General provisions

Our internal control system (IKS) comprises all principles, procedures and measures introduced by the company’s management, executives and other parties that are primarily aimed at ensuring reliable and prompt financial reporting with an adequate degree of security. In terms of its structure and processes, our IKS is based on the globally recognised and widespread COSO reference model. We have adopted a risk-based approach in which those organisational units, processes and systems with greater risk exposure are safeguarded more closely by control activities.

The financial reporting covered by our IKS comprises our quarterly statements, interim consolidated financial statements, half-year financial report, consolidated financial statements and combined management report, as well as the separate financial statements of MVV Energie AG.

IKS management

Our IKS management experts ensure that our IKS functions reliably and are continually enhancing the system. The central IKS manager ensures that MVV has an effective IKS with uniform groupwide requirements. To this end, he develops the principles for the structure, processes and documentation of our IKS, including necessary IT solutions. Furthermore, he supports and monitors implementation of these requirements at the group companies included in the IKS. On the level of group companies and cross-departmental functions, IKS officers are responsible for the functionality of the IKS on a decentralised basis. These officers are appointed by managers with legal responsibility for the respective area and, in this capacity, also report to the central IKS manager.

Control environment

The foundation for our IKS is provided by a well-functioning control environment. This provides the framework for implementing the principles, processes and measures of our IKS and has the following key features:

- “Lived Energy”, the programme jointly developed by our Executive Board, managers and employees, sets out the values guiding our company and governs the way all colleagues behave both towards each other and towards third parties.
- We have regulated the allocation of competencies and responsibilities within the company (organisational structure) in the form of organisational structure charts and job descriptions.
- For all company processes relevant to the IKS (process structure), there are up-to-date process diagrams, manuals and implementation guides, as well as risk and control matrices, including documentation requirements for the performance of control activities.
- We also safeguard the required specialist and personal skills of our employees with the assistance of our job descriptions; these include the relevant requirements in holders of the respective positions.
- We permanently raise awareness of the need for and benefits of the IKS by providing presentations and training, as well as by sharing information and experience within the company.

Risk assessment

Our overriding IKS objective of ensuring reliable and prompt financial reporting is adversely affected by risks due above all to amended or incorrectly functioning internal processes, amended or malfunctioning IT systems, erroneous conduct on the part of persons (whether unintended or intended), internal and external events (such as company acquisitions or new accounting standards).

In systematically assessing risks relating to MVV’s financial reporting, our IKS management each year reviews all group companies on the basis of suitable criteria to assess their materiality and thus whether they are to be included in the groupwide IKS and, if so, on the basis of which requirements. Furthermore, our IKS management holds workshops with group companies that have been newly included. At these, it identifies and evaluates operative IKS objectives and those risks which counter compliance with such for all IKS-relevant processes. Moreover, those managers who are responsible for processes directly or indirectly involved in financial reporting perform a review at least once a year to ascertain whether their operative IKS objectives and existing risks are up-to-date and complete. They are supported in this by the IKS management.

Control activities

The control activities we have introduced include all principles and processes intended to ensure that we suitably address the risks identified and thus meet our IKS objectives. These control activities affect all levels of the company and processes and can basically be subdivided into written requirements in which, among other content, the IKS objectives are formulated and measures and processes intended to ensure implementation of these requirements.

The control activities for all IKS-related processes at MVV are based on defined policies, manuals, work instructions and the like. We draw on suitable internal checks to safeguard correct implementation of the requirements stipulated, taking due account of the risks identified. Each year, we review our policies and manuals to ensure that they are up to date and our control activities to check their suitability to reduce identified risks in line with expectations.

At all group companies and cross-departmental functions relevant to the IKS, irrespective of their size, application is made of a uniform minimum level of operative IKS objectives. This has to be backed up with suitable internal checks. Among others, these include strict separation of critical functions in all IKS-related processes, as well as the regular review of access authorisations to the IT systems relevant to financial reporting.

Over and above this minimum level, group companies and cross-departmental functions have further internal checks in place depending on relevant risk factors, such as their materiality to the Group or the complexity of their business models. These checks safeguard those processes that harbour risks for financial reporting, such as the placing of orders with and payment of suppliers, hiring and payment of employees, metering and billing of services performed, management of liquidity, ongoing recording of business transactions, inventories of non-current and/or current assets, preparation of the separate and consolidated financial statements, preparation and publication of the annual report or the preparation and submission of tax returns. Internal checks may take a variety of forms, such as the dual control principle, approval limits, signing powers, review and approval by managers, data reconciliation, plausibility checks, or checks to ascertain completeness and correctness.

Alongside the checks we have located in the financial reporting and other operative processes, we have also secured our IT systems and the processes required for them to operate reliably with suitable general IT checks. Examples here include role-based authorisation management governing access to our accounting systems, the prevention of critical combinations of authorisations, separate responsibilities for systems used for development, tests and productive use and measures to prevent the loss of data, system downtime or malware attacks.

Communication and information

The IKS in place at MVV ensures that the relevant company departments always have all the information they need at the right time and in the necessary quality. To this end, we generate relevant information internally or procure it externally and subsequently communicate it as appropriate within the company.

Our employees receive or themselves compile information about their tasks and responsibilities relating to the IKS in the form of organisational manuals, company manuals and the like. We supplement this information with policies, manuals and work instructions for all processes. We present the processes and embedded internal checks in visual form in process charts; risk and control matrices contain all details on internal checks. We use IT solutions to support and document the execution of control activities. The IKS management also performs training and offers support.

If they suspect potential misconduct, our employees can also use an anonymous whistle-blower hotline operated by an external confidence lawyer commissioned by MVV.

By regularly sharing information between IKS management and group internal audit, we ensure that these key players are at all times informed about all current developments in connection with our IKS.

The IKS manager reports on the status of Group IKS to the relevant head of department on a quarterly basis and to MVV Energie’s Executive and Supervisory Boards on an annual basis. Among other aspects, the status reports submitted by the IKS manager are based on information from the IKS officers, data from the IT solution used to manage performance of checks and feedback received from the IKS audits performed by the group internal audit department.

Supervision and improvement

The IKS in place at MVV is continually supervised and improved on several levels.

With support from the IKS management, our managers perform a self-assessment of the effectiveness of the IKS in their area of responsibility at least once a year. To this end, they assess the appropriateness of the existing IKS structure and assure themselves that control activities have been performed as envisaged. The findings of these self-assessments are drawn on to further improve the IKS.

Together with managers, the central IKS management also supervises our IKS by managing and supervising the implementation of control activities with the assistance of IT tools and by initiating an escalation processes in the event of non-compliance with requirements.

As the managers with legal responsibility, the managing directors and board members of the group companies included in the IKS and the heads of cross-departmental functions included in the IKS submit an annual formal declaration of compliance in which they confirm that the IKS is effective in their area of responsibility and also meets MVV’s requirements.

As an independent body, the group internal audit department at MVV Energie AG regularly audits all group companies and cross-departmental functions included in the IKS to assess the appropriateness and effectiveness of the respective measures. Any deficiencies are reported and promptly remedied by the managers responsible.

The Executive and Supervisory Boards of MVV Energie AG fulfil their duty to supervise the IKS by being informed by the IKS management each year about the status of the IKS. From the perspective of MVV’s Executive Board, the IKS is appropriate and effective.

Explanation of risk management system (RMS)

Our risk management system (RMS) pursues the objective of enabling us to detect opportunities and risks at an early stage of developments. Opportunities may lead to a positive variance in company earnings compared with the value budgeted, while risks may result in a correspondingly negative divergence. We evaluate opportunities and risks at the Group on the basis of in-depth market and competitive analyses. We reduce risks wherever possible or pass them on to third parties. Here, we devise suitable measures and monitor their effectiveness and implementation. In an uncertain climate, however, a successful strategy may also involve deliberately entering to risks, provided that these are manageable and offset by suitable opportunities.

Risk management in context of MVV's strategy

Our corporate strategy therefore has direct implications for our risk management. The opportunities and risks expected at the MVV Group directly reflect the potential and challenges resulting from the transformation in our business processes towards even greater sustainability and climate-positive business activities.

Our course to the future, the Mannheim Model, has three strategic focuses, all of which involve both opportunities and risks. Alongside the heat transition, with the move towards increasingly renewable heat generation, the electricity transition, with the accelerated expansion of renewable energies, with our innovative marketing concepts and pooled project development capacities we offer solutions to our customers that support them in implementing their own energy transitions. These should contribute towards our #climatepositive target and enable MVV to exploit associated additional opportunities. At present, all this is taking place against the backdrop of a significantly changed market risk situation and ever greater requirements placed in the sustainability of our business model. Alongside our own measures, our risk management system is accompanied and supported by additional requirements which require us to report in accordance with the EU Taxonomy and in future also with the Corporate Sustainability Reporting Directive (CSRD).

Basic principles and organisation of RMS

The Executive Board determines the company's risk policy and lays down all processes and responsibilities. Responsibility for operative risk management is located with the legal business units and business fields and, more specifically, with so-called "risk bearers". These are the employees who, on account of their respective expertise, are included in the chain of responsibility for operating earnings at their respective business units. One of their core tasks involves regularly reviewing the current business situation. They identify material opportunities and risks and assess the potential implications of these for adjusted EBIT. They report their assessments regularly and in standardised form to our central risk controlling function. The tasks incumbent on risk bearers also include implementing, or monitoring implementation, of measures enabling risks to be avoided, managed or reduced and opportunities to be exploited.

RISK MANAGEMENT SYSTEM

Our central risk controlling function monitors the risk situation at the Group. It continually monitors those opportunities and risks that are relevant to our business and aggregates these into an opportunity/risk profile. This profile represents a net analysis, meaning that it already accounts for all countermeasures taken to reduce risks that are already factored into the measurement of the risks. Existing opportunities and risks are also aggregated using probability methods.

In our risk report, we comment on the largest single risks separately. We combine the implications of opportunities arising or risks materialising with their respective probability of occurrence and evaluate the opportunity/risk situation accordingly. In our short and medium-term planning, we carefully assess opportunities and risks and account for these in our earnings forecast.

The Executive and Supervisory Boards are provided with a quarterly risk report presenting the Group's opportunity/risk profile. Any significant new risks arising at short notice or material changes in existing risks are reported immediately to the Executive Board, which in turn informs the Supervisory Board as appropriate.

Supervision of IKS and RMS

Both the IKS and the RMS are implemented, maintained and supervised by the executive boards and managing directors of consolidated subsidiaries. Our group internal audit department audits both systems regularly as part of its risk-based audit plan. This department identifies any weak points and reviews whether the improvements introduced are having their intended effect.

The Supervisory Board and the Audit Committee of MVV Energie AG monitor the appropriateness of the structure and functionality of these two systems.

Presentation of opportunity/risk situation

In what follows, we present the current opportunity/risk situation of MVV. We allocate opportunities and risks in each case to one of our total of six categories. We subsequently quantify the opportunity/risk situation for each category and present the potential impact on earnings for each category in terms of the Group's budgeted adjusted EBIT. In this, we categorise the respective opportunity/risk situation in three different risk classes: "low", "medium" and "high". These classifications show how high, as a percentage, the expected impact of the category is for the Group's budgeted adjusted EBIT.

In addition to the opportunities and risks typical to its business and the risks resulting from the coronavirus pandemic, since the 2022 financial year the Group's risk situation has also been notably influenced by the effects of the war in Ukraine. Risks in our business have risen significantly compared with the 2021 financial year, with increases in particular in crisis-related market price, financing and legal risks. Furthermore, operating risks (such as cyber-IT risk and the availability of critical raw materials and supplies) have risen for companies in Germany and our sector.

From the outset, we have countered the insecurities newly arising since February 2022 with a separate task force. This monitors changing conditions in the energy industry, including stark and volatile market movements and regulatory interventions, such as any potential cap on electricity and gas prices or the possibility that certain revenues will be siphoned off. This way, MVV intends to develop proactive measures and solutions that are coordinated with the objectives of our strategy (further details can be found in the chapter Corporate Strategy) in order to limit potential negative implications either for our own business performance or for our customers to the best possible extent.

We provide detailed comments on the principal opportunities and risks in the six categories presented below. Here, we present the potential implications for our reporting segments based on the structure used to manage and report on the business.

EXPECTED RISK SITUATION IN FY 2023

Risk category		Risk class
PRICE RISKS	» Market prices: • Clean dark spread • Clean spark spread » Procurement prices: • Energy, waste and biomass • Supplies and operating resources, components and hardware » Exchange rates and interest rates	MEDIUM
VOLUME RISKS	» Sales volumes: • Weather conditions and wind volumes • Economic climate » Competition and efficiency » Procurement for waste and biomass	MEDIUM
OPERATING RISKS	» Renewable energies project development » Construction projects » Plant operation » Supply chains » Personnel » IT risks	HIGH
LEGISLATIVE RISKS	» Regulation » Legal risks » Legal interventions in operating business	MEDIUM
FINANCING RISKS	» Receivables default » Refinancing » Liquidity » Countries	MEDIUM
STRATEGIC RISKS	» Strategic decisions (including investments)	LOW

Risk[1] in % of operating earnings (adjusted EBIT) at Group:
high: > 40 %   medium: 10 % to 40 %   low: 0 % to 10 %

1 Budget variance in earnings: likely average maximum damages in the financial year in which the resultant charge on earnings may arise

Price opportunities and risks

In the price opportunities and risks category we summarise commodity price fluctuations on both procurement and sales markets, as well as exchange and interest rate movements. We deploy financial instruments to limit interest rate, exchange rate and commodity risks. These are described in more detail in the chapter Notes to Balance Sheet (Note 36).

Starker fluctuations from marketing our generation positions

The clean dark spread (CDS), clean spark spread (CSS) and the result of marketing electricity from the generation plants in our environmental energy business are each calculated as the difference between the electricity revenues on wholesale markets and the costs incurred to generate the electricity. The costs of electricity generation include – in each case together with the costs of CO_2 emission rights – the costs of coal for the CDS and the costs of gas for the CSS, in each case including transport costs and currency translation differences, and the costs of substrates for the generation plants in our environmental energy business. We work with suitable hedging strategies to limit potentially negative implications for our generation portfolio.

Since the beginning of the war in Ukraine, we have seen stark price rises on wholesale markets accompanied by significant fluctuations (volatility). These have impacted on the CSS and CDS. Higher electricity generation margins in the market may impact positively on adjusted EBIT in Supply Reliability, the reporting segment to which the marketing of generation positions in our combined heat and power business field is allocated. Risks countering these market opportunities arose most recently due to limited availability in our generation capacity at a company recognised at equity. Furthermore, our opportunity/risk profile has been significantly influenced by interventions by lawmakers in plant management and operating strategy – on the one hand due to potential restrictions on generation in connection with the gas supply situation in accordance with the German Substitute Power Plant Readiness Act (EKBG) and on the other due to short-term incentives to uphold fossil-based generation capacities (reactivation of coal-based generation plants due to potential gas shortage versus decommissioning to achieve climate protection targets).

Greater fluctuations in market procurement prices
The energy volumes required by our sales department for customer supplies at various locations are mostly procured on the energy trading market. To mitigate the recent sharp rises in energy procurement prices triggered by the war in Ukraine, our energy trading subsidiary MVV Trading concludes futures transactions, some of which several calendar years in advance, taking account of our applicable hedging regulations. We thus raise the consistency of our earnings and act early to improve our planning reliability for future financial years. This way, we can also reduce the impact of the recent sharp rises in market prices on our procurement costs and customer sales prices.

Furthermore, there is nevertheless increased uncertainty at present as to whether the sharp rises in procurement costs can be fully included in all cases our price calculations. Here, the industry is dependent on a legal framework that is to be specified by lawmakers (German Energy Security Act – EnSiG) in response to the new and exceptional market situation.

The scale of increases recently observed in procurement prices and the speed at which these changes have taken place could create economic difficulties for individual market players and, as a result, threaten the performance of contracts with us. Despite our active management of trading limits with our trading and contract partners, a price risk may arise in connection with the potential procurement of replacement resources. At the same time, insolvencies among competitors in the energy industry due to market volatility mean that customers previously supplied by third parties are returning to the basic supply at short notice and on an unplanned basis. For these customers, early hedging with cost mitigation is no longer possible. As the basic supplier, MVV may face a margin risk in supplying such customers.

Due to potential supply bottlenecks and delays, price risks may arise for commodities, materials or supplier products that require procurement. Particularly worthy of mention in this respect are raw materials and supplies for power plant operations, as well as components such as photovoltaics systems, wall boxes, transformers, smart meters and cables. We are also noticing an increasingly marked reduction in the availability of service providers for plant construction and installation.

Fluctuations in waste and biomass procurement prices
We observe and assess potential opportunities and risk resulting from fluctuating waste prices, and that in both the German and British markets. Moreover, we track the development in biomass prices across Europe. Our material and substrate flow management enables us to identify potential risks in the New Energies reporting segment at an early stage and to mitigate these with suitable measures. Waste volumes are significantly dependent on overall macroeconomic and commercial developments. Here too, the war in Ukraine may impact on our waste incineration business.

Increased movements in exchange rates
Exchange rate movements may create opportunities or harbour risks for us in connection with fuel procurement, our involvement in the UK and the Czech Republic and our international project development business. We limit these risks with natural hedges and futures transactions. Since the outbreak of the war in Ukraine, we have observed additional uncertainty in exchange rate movements.

Changes in interest rates monitored
Our finance department continually monitors the interest rate risks relevant to our business. Where possible, we finance our investment projects with fixed interest rates and congruent terms. We already account in our company planning for the expected impact of rising interest rates when projects are refinanced. Changes in interest rates also impact on our project development business. Demand for renewable energies may fall, for example, if interest rates rise and other forms of investment become more attractive for investors.

Volume opportunities and risks

Our operating earnings may be positively or negatively influenced by fluctuations in volumes both on the procurement front and on the generation and sales front.

Fluctuations in turnover due to weather conditions and wind volumes are key factors
Two key factors influencing our business performance are weather conditions and wind volumes. The weather has a major impact on our turnover with district heat and gas, particularly during the heating period from September to May. Electricity generation volumes at our wind turbines are dependent on wind volumes. Opportunities and risks arise for our business performance if temperatures during the heating period and/or annual wind volumes deviate from our expectations. Together with relevant price movements, the development in these factors results in opportunities or risks for our business performance.

Fluctuations in volumes due to changes in economic conditions have a corresponding impact
MVV is directly affected by macroeconomic developments particularly due to current developments in energy markets. If our major industrial and commercial customers cut back their production due to the economic situation or supply bottlenecks, this may lead them to procure lower volumes of energy from us. Conversely, our sales volumes increase if our customers step up their production due to economic developments or their strong competitive positions. Together with relevant price movements, these factors too lead to opportunities or risks for our business performance.

Given the war in Ukraine, our electricity and gas sales volumes could decrease due to lower demand, a shortage of gas, necessary saving measures or the loss of customers.

Fluctuations in turnover possible due to competition or efficiency measures
Competitive pressure in the energy market is as high as ever. Should customers decide to switch provider, then this reduces our sales volumes. Similarly, efficiency measures implemented by our customers, such as heat insulation, may also reduce our volumes. If customers switch to generating the energy they consume themselves, we accompany them as partners and support them with innovative, competitive products and develop services offering substantial customer benefits. Alongside opportunities arising in the market due to growing climate protection requirements, the current rise in energy prices also makes innovative and renewable energy generation technologies increasingly interesting for our customers. We expect this to create additional positive demand and value creation potential. We also accord great value to working with local authorities on a basis of partnership. By working together on shared sustainability targets, we also create a basis for extending existing concessions and improve our chances of acquiring new concessions.

Quantity and quality of waste and biomass are crucial factors
With regard to incinerating commercial waste and biomass, our adjusted EBIT may be affected both by the volumes available and by their quality. Both aspects are in turn influenced by the macroeconomic situation and legal requirements, as well as by plant capacities at competitors and weather-related events. We minimise volume risks for our plants by working with professional material and substrate flow management. We also pursue a substitute procurement strategy.

Further developments in the war in Ukraine and potential resultant reductions in industrial and commercial production and waste volumes may have a noticeably negative impact on waste prices and procurement volumes. The UK’s exit from the European Union (Brexit) may also still have a negative impact on our activities in the UK.

Operating opportunities and risks

MVV’s operating opportunities and risks chiefly arise in connection with its renewable energies project development business and with the construction and operation of energy generation plants and grids.

Uncertainties exist in renewable energies project development business
One key factor in achieving our #climatepositive target is our own project development expertise. Decentralised renewable projects in our project development business generally have shorter planning and construction stages than large-scale generation plants. Having said that, these projects also involve uncertainties: In general, the development of relevant markets depends both on the further development in political regulation and on levels of public acceptance. Based on our assessment, key opportunities and risks in the onshore wind turbine project development business in Germany involve the scope and structure of future project tenders and the development in market interest rates. During implementation, the progress made with the respective projects may be negatively influenced by factors such as any delay in obtaining building or operating permits, or failure to obtain such permits, as well as ever higher approval requirements and related issues. Further factors that cannot be excluded are the downstream impact of supply delays or bottlenecks with supplier products such as, in the case of photovoltaics systems, batteries, wall boxes, transformers, smart meters and cables, as well as price increases at upstream suppliers that we cannot fully factor into our sales prices in the short term.

Particularly in connection with potential supply bottlenecks at upstream suppliers and delays to processes, we monitor any potential delays to operation launches or projects, especially in the project development business. We have taken measures within our procurement management to counter the effects of potential supply bottlenecks.

Our financial success in the international business is also determined by political and macroeconomic developments in our target markets. Major sources of uncertainty affecting our success abroad include potential disruptions in international trade relationships, which may impact on market access (punitive tariffs) and competitiveness, and the possibility of further interventions in subsidy regimes. We also face opportunities in our renewable energies business given our extensive experience and great competence in project development and operations management for renewable energies plants.

Risks from progress with construction projects countered

By their nature, large-scale generation plants and grid infrastructure installation measures have long planning and construction stages and harbour corresponding risks. Any delays in the completion and launch of operations at our major projects could impact negatively on our expected adjusted EBIT, as could any unplanned costs to procure substitute electricity and heat or additional costs due to new developments or potential price increases arising at short notice at upstream suppliers. We therefore accord great value to ensuring that projects are robustly designed and budgeted in the planning stage already and to detecting and evaluating the material opportunities and risks involved in projects at an early stage of developments.

We are paying particular attention to the impact of the war in Ukraine on supply chains and upstream suppliers, as well as on the prices of materials and commodities for such construction projects. Any delays to supplies of materials or unbudgeted increases in the cost of materials upon the completion of modules or sections could lead to delays in construction and projects, as well as to margin risks.

We counter these risks, to the extent that they are within our control, with professional project organisation and by commissioning suppliers with experience in the sector. Where contractually possible, we pass on the implications or project risks, especially those involving higher costs and deadline overruns, to the contractual partners responsible for such.

Uncertainties resulting from plant operations monitored

In our New Energies, Supply Reliability and Strategic Investments reporting segments, the operations of energy generation plants and grid facilities to supply our customers with energy and utilities may also involve substantial operating uncertainties for our Group. Unscheduled downtime at plants may lead to a loss of production or interruption to supplies. In this context, additional financial outlays may also be incurred for example to repair the plant, for substitute supplies to our customers or for contractual penalties.

The implications of the war in Ukraine present additional challenges in terms of organising operations. Alongside additional risks relating to ongoing operations, such as the risk of shortages of relevant raw materials and supplies, account now also has to be taken of the amended approach to substitute energy generation targeted by lawmakers for the short and medium term in order to respond to the risk of a gas shortage. This includes increasing the availability of individual plants or reactivating these if needed. This may require replacement investments, sometimes substantial, for an unspecified term of operations and thus uncertain economic viability.

To safeguard supply reliability and reduce plant operation risks, for our existing generation capacities we perform regular maintenance and monitoring measures and make every economically feasible effort to minimise downtime at our plants and the potential resultant risks. This way, we also aim to do justice to our claim to act as a reliable supply partner and avoid any risks to our reputation. Due to the nature of the issues involved, we nevertheless cannot exclude the possibility of downtime entirely. The measures we take to counter this risk in general include optimising scheduled inspection times within our maintenance strategy. We thus work towards using capacity at our plants over and above the planned hours of use or to increase efficiency rates. This assists us both in realising opportunities due to higher generation volumes and in avoiding operating risks. To limit the financial implications of any potential damages, we have also agreed suitable insurance policies. Moreover, we assess the risk and environmental protection aspects of potential clean-up projects on derelict land formerly occupied by our plants.

Personnel developments noticeable

Our employees form the foundation for our company's success. We work with numerous measures to attract the right employees to us and retain them in the long term. We see our #climatepositive target as providing an opportunity to be viewed as an attractive employer by the right employees. Risks may nevertheless also arise with regard to our personnel. Our group of companies may also face capacity risks and risks resulting from ageing workforces, particularly among specialists, due to pending demographic changes accompanied by the new and growing requirements presented by the energy transition. These risks apply both to MVV's own business fields, as well as to the partners with which we cooperate to install and service new energy solutions. The extent of these risks also depends on the attractiveness of the company and the respective location. To enable us to continue filling key positions as efficiently as possible, we will keep providing our staff with targeted training. By taking targeted measures to strengthen our staff recruiting unit, we are upholding our ability to fill positions with the required specialists and experts at a high level.

To date, we have successfully managed the particular challenges presented by the coronavirus pandemic. To protect our employees while simultaneously safeguarding our operating processes, we adopted additional rules governing conduct, contact and absence and adapted the forms of cooperation and communication to work requirements, not least by drawing on digital solutions. These necessary solutions and requirements have been widely accepted and implemented by our staff. This way, we safeguard the availability of personnel required for our processes – at MVV, at our shareholdings and in our cooperation with external companies.

In the pension surveys we have compiled, we have also accounted for those factors that may involve financial risks from pension obligations. Based on the latest information available, we have included these factors as appropriate in our budgets (chapter Notes to Balance Sheet (Note 29)).

IT risks systematically limited

Two crucial factors for nearly all our business processes are secure data storage and interruption-free information technology. We therefore accord great priority to systematically protecting our IT infrastructure and systems against any potential attacks by third parties.

We reduce our IT risks as far as possible by implementing an extensive range of technical and organisational measures and by drawing on insurance solutions where these are available in the market. We make use of security systems and only grant access authorisations to systems and information on a restrictive basis. We have redundant copies for all our key hardware components and permanently reflect data between production systems and geographically separate backup systems. We also have a backup computer centre. To counter widespread and constantly rising threats IT threats due to blackmail and malware and to respond to the recent intensification in the cyber-IT risk situation due to geopolitical motives, we are continually developing additional measures to enhance our IT security. Together with external consultants, we are thus reviewing and enhancing our cyber-IT security.

Legislative risks

In this category, we aggregate those uncertainties existing in connection with regulation or with other changes in the legal foundations for our business operations.

Regulatory risks actively countered
Companies operating in the energy industry face the basic risk (and opportunity) that federal and state lawmakers and authorities – such as the Federal Network Agency (BNetzA) or cartel offices – may amend the regulatory framework. In the past, this related, for example, to the grid fees set by the BNetzA. At present, energy and climate policy decisions in particular have significant implications for our business performance. Examples here include regulations governing the expansion in renewable energies, new requirements to achieve national climate protection targets and subsidies for CHP plants.

One new addition to this category results from the regulatory changes resulting from the war in Ukraine, such as the interventions in electricity generation structures currently prepared by lawmakers.

With regard to the legislation already in place for the coal exit, the war in Ukraine has led to the amended political objective of temporarily retaining and reactivating existing generation capacities and those already in the process of being decommissioned. This development harbours both risks and opportunities for MVV. Risks result in particular from potential legislative restrictions or interventions in our planned plant operations to generate district heat and electricity. There is also uncertainty as to the economic viability of short-term replacement and renewal investments for plants that are already in the process of being decommissioned in line with government plans and climate protection targets.

There is still uncertainty as to the possibility of allocating the sharp rise in energy procurement and generation prices to our sales prices in full. In this respect, developments in the industry will depend on a legal foundation to be specified by lawmakers in the new German Energy Security Act (EnSiG) in response to the new and exceptional market and energy supply situation.

We see the legal framework for transitioning to sustainable energy generation as presenting challenges, as well as clear strategic potential. Based on our #climatepositive target, we are actively and consistently seizing this potential with innovative products, such as the extensive efforts we are making to develop green heat supply structures within the Mannheim Model.

These challenges apply not only to our activities in Germany, but also by analogy to our international business. We counter these risks actively by participating in the political opinion-forming process, adapting our processes and business models and, where possible, also developing suitable products. This way, we are also able to exploit any opportunities that arise.

Legal risks in focus
MVV may be exposed to legal risks in connection with court cases due to product liability and with unenforceable contracts or contractual terms. We therefore check, negotiate and draft contracts with the aim of limiting these risks.

Our compliance management system (CMS) helps us to avoid any infringements of laws. This system is described in further detail in the section Respect for Human Rights and Combating Corruption and Bribery Aspect in the chapter Combined Non-Financial Declaration. Where applicable, any compliance-related risks are managed in the compliance management system and simultaneously recorded in the risk management system (RMS). Alongside risks relating to potential infringements of our compliance regulations, the CMS also monitors risks relating to respect for human rights in accordance with the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (LkSG). This relates both to our own activities as well as to compliance with requirements within our supply chains.

MVV's business performance is also exposed to risks and opportunities which result from legal pronouncements on energy industry-related matters or other topics. These could, for example, limit (or potentially also extend) our ability to structure contracts. In connection with the war in Ukraine, legal requirements may also restrict the company's ability to include potential additional costs in sales prices.

Financing opportunities and risks

In this category, we mainly report on receivables default risks and on refinancing and liquidity opportunities and risks.

Receivables default risks possible

There is the risk that customers or business partners may fail to settle our invoices, or settle them only in part. This risk may arise in our OTC trading activities in the Customer Solutions reporting segment, for example, or in our long-term supply relationships with business customers. Moreover, the sharp increases recently seen in energy product prices, which arose at short notice, have increased the risk that individual wholesale partners may encounter financial difficulties, threatening the fulfilment of their contractual obligations to us. To limit this kind of receivables default risk in all reporting segments, we select our business partners systematically and with due commercial prudence, check their creditworthiness and, where necessary, agree deposits of securities, and in particular guarantees. Moreover, we are also diversifying our portfolio, thus enabling us to avoid clusters of default risks.

Due to the war in Ukraine, delays and defaults may arise in the settlement of outstanding receivables, also to an increasing extent among end customers. We are proactively countering this risk with active receivables management. To deal with this exceptional crisis situation and the associated uncertainty on a basis of partnership with our retail customers, at MVV Energie for example we have additionally introduced a gas bonus programme to achieve savings.

Refinancing and liquidity risks monitored closely

The possibility of being unable to obtain liquid funds, or not to the full extent required, is referred to as refinancing and liquidity risk. To cover our capital requirements, we have a variety of financing instruments at our disposal. These include promissory note loans, bilateral loans and syndicated loans. We continually monitor the financial markets, regularly share information with our lenders and carefully monitor our liquidity. This enables us to counter any refinancing and liquidity risks and, where possible, to additionally exploit any opportunities arising in the market. Furthermore, our group-internal cash pool also serves to reduce this risk.

Given the war in Ukraine, we are monitoring our liquidity management even more closely than in the past. Together with our energy trading company MVV Trading, our finance department has proactively launched a group project in which we intend to analyse in detail any potential future development in and influences on our liquidity management at an early stage of developments. This is to be viewed in particular against the backdrop of market prices on energy trading markets, which have now become highly volatile.

This analysis will focus above all on the resultant cash-effective security deposits required for wholesale trading, i.e. margins, the daily volumes of which currently fluctuate sharply and at increasingly high levels compared with previous years. These involve requirements customary to the industry in terms of depositing cash-effective financial collateral to open trading positions (initial margins) and cover subsequent fluctuations in market prices (variation margins). The amount of collateral to be deposited for the variation margin is based on the current market price compared with the price at which we as a company entered into the respective trading transaction via the exchange. Depending on price developments, a company may be a provider or a recipient of this collateral. By contrast, the initial margin always results in an obligation to provide a deposit, the amount of which depends on current market prices and their volatility. We maintain cash lines to ensure that we always have sufficient liquid funds even in the event of larger-scale fluctuations. If need be, we can take countermeasures and conclude off-market transactions. However, these would increase our potential receivables default risk.

Country risks under continuous observation

For MVV, country risks take the form of transfer risks and the possibility that states may become unable or unwilling to meet their payment obligations. Due to our international activities in the field of renewable energies project development, country risks may impact on our adjusted EBIT. We continually monitor any uncertainties relating to the terms of access of our target markets that may arise due to potential disruptions in international trade relationships. Before entering international markets that are new to us, we perform detailed analyses of potential risks. For our existing activities, we observe the political and economic situation on location and continually monitor alternative courses of action. Should any deterioration arise in the situation and our risk position, we may decide to leave the given market. We are monitoring current developments in the UK economy very closely, for example, in respect of our current activities and those planned for the future.

Strategic opportunities and risks

Good strategic decisions form the basis for any company's success. The energy policy and industry framework have been changing dynamically for years now. This transformation harbours strategic risks, but also gives rise to new opportunities. We intend to actively shape this transformation and make use of it to promote our interests. That is why we have set ourselves the target of becoming #climatepositive from 2040. Against this backdrop, we review our investment projects in great detail and decide in which markets, technologies, companies and projects we intend to invest, as well as the timing and scope of such investments. We take these decisions on the basis of in-depth market and competitive analyses and painstaking viability calculations for investments and projects. Our group strategy department also liaises closely with the Executive Board to monitor our strategic alignment on an ongoing basis and adjust it where applicable to the new conditions.

Key components of our strategy (further details of this can be found in the chapter Corporate Strategy), and thus of our Mannheim Model, are the heat and electricity transitions, which we are promoting with an extensive programme of strategically important investments. Further information about these can be found in the chapter Presentation of Asset Position. We expect these to create competitive advantages and sustainable growth. Even though we review and plan such investments with great care, erroneous assessments or unexpected changes in the macroeconomic framework may reduce the level of adjusted EBIT generated in future financial years.

We see the heat transition, which we are promoting by converting our generation portfolio, as offering opportunities in the Group's business fields. Examples here include generating heat from sustainable energy sources, such as river heat pumps or deep geothermal energy, with which we are reducing the fossil share of our generation. This also includes measures to reinforce our district heat, gas and electricity grids. This way, we aim to secure the supply while at the same time avoiding risks both in our business and at our customers. One example is the river heat pump which the power plant Grosskraftwerk Mannheim AG (GKM) is building on behalf of MVV. With this pump, we will use water from the Rhine as a climate-neutral source of heat and thus generate district heat from 2023. With thermal energy capacity of around 20 MW and electricity capacity of 7 MW, this will be one of the largest heat pumps in Europe.

Given the transformation in the German energy system and the scope of the political framework, our company has only limited planning certainty. We are tracking the decision taken by the Federal Government to exit from coal and head for climate neutrality with our own ambitious decarbonisation strategy. Further information about this can be found in the section Environmental Concerns Aspect in the chapter Non-Financial Declaration. The framework for withdrawing from our conventional generation capacities will largely be determined by the coal exit legislation and, since the outbreak of the war against Ukraine and associated potential gas shortage, at the same time by the German Substitute Power Plant Readiness Act (EKBG). This situation, and in particular the changes arising at very short notice in the legal framework, creates great uncertainties for our company.

For renewable energies, we still expect sustainably attractive market potential. This has now been significantly extended by the current rise in energy prices as a result of the war in Ukraine. That is why, in our Mannheim Model, we are also focusing on the electricity transition, i.e. on the accelerated and continued expansion in renewable energies, innovative electricity marketing products for renewable energies on the energy trading market and participating in innovation tenders. We pooled our project development capacities in the year under report. We currently still see challenges surrounding the addition of onshore wind turbines, where difficult hurdles apply in approval processes, particularly in respect of aligning the interests of conservation, local residents and the duration of the processes needed to obtain a basis for planning.

Based on our assessment, the German biomass market and the anaerobic digestion of bio-waste still offer expansion potential and investment opportunities, with these being due in particular to ever stricter requirements governing the disposal of bio-waste. We have all-round experience in both building and operating biomass plants. We see further opportunities for our group of companies here, not least given our consistent alignment towards #climatepositive. Given our expertise and our partnership-based approach to working towards sustainability targets, we see expansion potential, for example in the anaerobic digestion of waste and in recovering resources upon the incineration of sewage sludge in the German market.

Further growth potential is available to us abroad and in photovoltaics. However, these areas are subject to dependencies on local subsidy regimes and clients. Not only that, there is tough competition, particularly in high-growth Asian markets.

Given the current energy price crisis and the political pressure to respond while retaining climate protection targets, we nevertheless expect to see an overall upturn in the expansion of renewable energies.

Together with climate targets, changing and newly emerging markets offer opportunities for innovation and profitable growth, particularly in the fields of renewable energies, decentralised energy supply, energy efficiency, digitalisation, building refurbishment and sustainable mobility. These apply to MVV, but also to our partners in the market. To master these challenges together and benefit from the resultant opportunities, partnership with our customers also forms part of our Mannheim Model (further details can be found in the chapter Corporate Strategy). We aim to offer solutions to all our customers to enable them to promote their own energy transitions. Examples here include the portfolio of solutions offered by MVV Enamic, products for decentralised solutions in our retail and business sales activities, the energy trading and portfolio management performed by MVV Trading and trade and other services that we offer on behalf of third parties. In implementing these developments, we see opportunities for synergies resulting from close cooperation with technology manufacturers and local installation companies.

Executive summary

Current developments in the energy and procurement markets, and in particular the implications of the war in Ukraine, have significantly increased the degree of uncertainty involved in entrepreneurial activity in the energy sector as a whole and thus also for MVV. The company's opportunity/risk profile has therefore changed compared with the previous year, with a significant increase in the range of implications which opportunities and risks may have on our adjusted EBIT and our liquidity.

Alongside volatility on the energy trading markets, the high ongoing level of competitive pressure, changes in energy and climate policy and regulatory interventions have substantial implications for our business performance. The resultant planning uncertainty for MVV is increasing, particularly with regard to long-term investments in electricity and heat generation plants. In the renewable energies project development business, further developments in Germany will particularly depend on sufficient space being made available and on processes being accelerated. In our international target markets for renewable energies, key risk factors alongside the development in political frameworks and market access terms include local subsidy and market regimes and relevant macroeconomic developments.

One aspect that is still uncertain is how the challenges and risks triggered or exacerbated by the war in Ukraine will develop in the medium and long term and how long these and the associated opportunities and risks will continue to apply. Key foreground issues are our supply chains, the availability of commodities and materials, the development in their prices and increasingly the cumulative impact of these individual factors on macroeconomic developments. Various government bodies on both international and national levels are attempting to counter these developments with numerous measures and thus limit the impact on societies and economies. On this basis, our overall expectation is that our industry will continue to face fundamental changes in the medium and long term as well and that this situation results in a high degree of planning uncertainty with regard to relevant underlying conditions. We are closely monitoring all relevant developments and, despite these limiting conditions, are working to ensure that our opportunity/risk profile remains as well balanced as possible.

From the perspective of MVV's Executive Board, there were and are no indications that any risks, whether individual or aggregate, could have endangered the continued existence of the overall company, or of any material subgroup, in the period under report, or could do so in future. The risk management system is structured appropriately and effective.

Consolidated Financial Statements

Income Statement

Income statement			
Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021	Notes
Sales	6,093,298	4,400,508	
Less electricity and natural gas taxes	169,710	166,720	
Sales less electricity and natural gas taxes	**5,923,588**	**4,233,788**	1
Changes in inventories	40,249	27,829	2
Own work capitalised	26,161	23,216	3
Other operating income (including income from derivatives measurement)	4,702,383	1,330,146	4
Cost of materials	5,283,911	3,320,010	5
Employee benefit expenses	510,767	487,301	6
Other operating expenses (including expenses from derivatives measurement)	4,713,641	1,100,158	7
Impairment losses on financial instruments	20,409	8,465	
Income from companies recognised at equity	64,513	36,167	8
Other income from shareholdings	17,550	– 1,644	8
EBITDA	**245,716**	**733,568**	
Depreciation and amortisation	211,262	203,900	9
EBIT	**34,454**	**529,668**	
of which result of IFRS 9 derivative measurement	– 315,329	255,415	
of which EBIT before result of IFRS 9 derivative measurement	349,783	274,253	
Financing income	36,452	13,614	10
Financing expenses	71,676	53,957	11
EBT	**– 770**	**489,325**	
Taxes on income	– 11,397	144,293	12
Annual net income	**10,627**	**345,032**	
of which non-controlling interests	302,732	146,255	
of which earnings attributable to MVV Energie AG shareholders (annual net income after minority interests)	**– 292,105**	**198,777**	13
Basic and diluted earnings per share (Euro)	**– 4.43**	**3.02**	

Statement of Comprehensive Income

Statement of income and expenses recognised in group equity

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021
Annual net income	**10,627**	**345,032**
Cash flow hedges	745,999	– 44,903
Hedging costs	– 102	310
Currency translation differences	– 2,476	12,022
Reclassifiable share of companies recognised at equity	– 898	– 369
Items that may subsequently be reclassified to profit or loss	**742,523**	**– 32,940**
Actuarial gains and losses	26,912	5,750
Non-reclassifiable share of companies recognised at equity	3,634	– 360
Items that will not be reclassified to profit or loss	**30,546**	**5,390**
Other comprehensive income	**773,069**	**– 27,550**
Total comprehensive income	**783,696**	**317,482**
Non-controlling interests	378,413	173,755
Total comprehensive income attributable to MVV Energie AG shareholders	**405,283**	**143,727**

Balance Sheet

Balance sheet

Euro 000s	30 Sep 2022	30 Sep 2021	Notes
Assets			
Non-current assets			
Intangible assets	316,205	287,663	14
Property, plant and equipment	2,955,387	2,888,292	15
Right-of-use assets	145,411	154,823	16
Investment properties	2,911	2,451	17
Interests in companies recognised at equity	194,418	201,498	18, 19
Other financial assets	59,168	70,647	21
Other receivables and assets (including derivative financial instruments)	3,780,667	1,259,662	22
Deferred tax assets	115,219	103,869	34
	7,569,386	**4,968,905**	
Current assets			
Inventories	352,155	210,880	23
Trade receivables	554,103	376,015	24
Other receivables and assets (including derivative financial instruments)	13,908,354	7,965,545	22
Income tax receivables	58,236	30,136	25
Cash and cash equivalents	1,884,998	1,258,177	26
Assets held for sale	1,047	–	27
	16,758,893	**9,840,753**	
	24,328,279	**14,809,658**	
Equity and debt			
Equity			28
Share capital	168,721	168,721	
Capital reserve	455,241	455,241	
Accumulated net income	569,653	929,166	
Accumulated other comprehensive income	524,178	– 161,911	
Capital of MVV	**1,717,793**	**1,391,217**	
Non-controlling interests	728,278	367,407	
	2,446,071	**1,758,624**	
Non-current debt			
Provisions	147,704	202,577	29, 30
Financial debt	1,733,109	1,609,170	31
Other liabilities (including derivative financial instruments)	3,590,489	1,286,937	32
Deferred tax liabilities	527,143	274,447	34
	5,998,445	**3,373,131**	
Current debt			
Other provisions	202,915	174,289	29, 30
Tax provisions	1,054	1,795	29
Financial debt	183,826	277,106	31
Trade payables	507,216	383,286	33
Other liabilities (including derivative financial instruments)	14,949,368	8,805,416	32
Income tax liabilities	39,384	36,011	34
	15,883,763	**9,677,903**	
	24,328,279	**14,809,658**	

Statement of Changes in Equity

Statement of changes in equity

	Equity contributed		Equity generated						
				Accumulated other comprehensive income					
Euro 000s	Share capital of MVV Energie AG	Capital reserve of MVV Energie AG	Accu-mulated net income	Currency translation differences	Fair value measure-ment of financial instru-ments	Actuarial gains and losses	**Capital of MVV**	Non-controlling interests	**Total capital**
Balance at 1 October 2020	**168,721**	**455,241**	**803,101**	**9,483**	**– 34,167**	**– 83,241**	**1,319,138**	**215,162**	**1,534,300**
Other comprehensive income	–	–	–	11,316	– 70,783	4,417	– 55,050	27,500	– 27,550
Result of business operations	–	–	198,777	–	–	–	198,777	146,255	345,032
Total comprehensive income	**–**	**–**	**198,777**	**11,316**	**– 70,783**	**4,417**	**143,727**	**173,755**	**317,482**
Dividends paid	–	–	– 62,611	–	–	–	– 62,611	– 18,477	– 81,088
Capital increase/reduction at subsidiaries	–	–	–	–	–	–	–	–	–
Change in scope of consolidation/ level of shareholding	–	–	– 10,101	–	1,064	–	– 9,037	– 3,033	– 12,070
Balance at 30 September 2021	**168,721**	**455,241**	**929,166**	**20,799**	**– 103,886**	**– 78,824**	**1,391,217**	**367,407**	**1,758,624**
Balance at 1 October 2021	**168,721**	**455,241**	**929,166**	**20,799**	**– 103,886**	**– 78,824**	**1,391,217**	**367,407**	**1,758,624**
Other comprehensive income	–	–	–	– 3,648	676,473	24,563	697,388	75,681	773,069
Result of business operations	–	–	– 292,105	–	–	–	– 292,105	302,732	10,627
Total comprehensive income	**–**	**–**	**– 292,105**	**– 3,648**	**676,473**	**24,563**	**405,283**	**378,413**	**783,696**
Dividends paid	–	–	– 69,202	–	–	–	– 69,202	– 22,919	– 92,121
Capital increase/reduction at subsidiaries	–	–	–	–	–	–	–	–	–
Change in scope of consolidation/ level of shareholding	–	–	1,794	– 120	– 11,179	–	– 9,505	5,377	– 4,128
Balance at 30 September 2022	**168,721**	**455,241**	**569,653**	**17,031**	**561,408**	**– 54,261**	**1,717,793**	**728,278**	**2,446,071**

Cash Flow Statement

Cash flow statement[1]

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021
Annual net income before taxes on income	– 770	489,325
Amortisation, depreciation and write-ups of intangible assets, property, plant and equipment and investment properties	208,570	203,900
Financial result	35,225	40,344
Interest received	6,976	6,770
Change in non-current provisions	– 12,128	– 5,065
Other non-cash income and expenses	346,025	– 263,377
Result of disposal of non-current assets	– 53,454	– 4,783
Cash flow before working capital and taxes	**530,444**	**467,114**
Change in other assets	– 354,070	– 82,228
Change in other liabilities	840,832	833,345
Change in current provisions	25,412	41,968
Income taxes paid	– 90,592	– 56,968
Cash flow from operating activities	**952,026**	**1,203,231**
Payments for investments in intangible assets, property, plant and equipment and investment properties	– 292,056	– 284,769
Proceeds from disposals of intangible assets, property, plant and equipment and investment properties	4,034	13,048
Proceeds from subsidy payments	18,659	10,155
Proceeds from sale of fully consolidated companies	25,617	–
Proceeds from sale of other financial assets including companies recognised at equity	76,508	2,052
Payments for acquisition of fully consolidated companies and other business units[2]	– 33,969	– 4,702
Payments for other financial assets	– 5,262	– 12,627
Cash flow from investing activities	**– 206,469**	**– 276,843**
Proceeds from taking up of loans[3]	321,792	463,286
Payments for redemption of loans[3]	– 288,064	– 343,075
Dividends paid	– 69,202	– 62,611
Dividends paid to non-controlling interests	– 22,919	– 18,477
Change due to changes in capital at minorities	– 742	– 8,575
Interest paid	– 58,815	– 48,665
Cash flow from financing activities	**– 117,950**	**– 18,117**
Cash-effective changes in cash and cash equivalents	627,607	908,271
Change in cash and cash equivalents due to currency translation	– 786	6,731
Cash and cash equivalents at 1 October 2021 (2020)	1,258,177	343,175
Cash and cash equivalents at 30 September 2022 (2021)	**1,884,998**	**1,258,177**
of which cash and cash equivalents at 30 September 2022 (2021) with restraints on disposal	150	226

1 See further disclosures on cash flow statement in Note 38

2 See disclosures in "Scope of consolidation and changes in scope of consolidation"

3 See "Liabilities in connection with financing activities" in Note 38

Cash Flow Statement

Cash flow – aggregate presentation

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021
Cash and cash equivalents at 1 October 2021 (2020)	**1,258,177**	**343,175**
Cash flow from operating activities	952,026	1,203,231
Cash flow from investing activities	– 206,469	– 276,843
Cash flow from financing activities	– 117,950	– 18,117
Change in cash and cash equivalents due to currency translation	– 786	6,731
Cash and cash equivalents at 30 September 2022 (2021)	**1,884,998**	**1,258,177**

Notes to MVV's 2022 Consolidated Financial Statements

Information about the company

MVV Energie AG has its legal domicile in Mannheim, Germany (Mannheim District Court: HRB 1780). Its business address is at Luisenring 49, 68159 Mannheim. It is the parent company of the MVV Group (MVV), which is an energy generator, distributor and service provider. Its business is managed in the reporting segments of Customer Solutions, New Energies, Supply Reliability, Strategic Investments and Other Activities.

Basis of preparation

MVV's consolidated financial statements have been prepared pursuant to § 315e (1) of the German Commercial Code (HGB) in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and the interpretations (IFRIC) of the IFRS Interpretations Committee (IFRS IC). The consolidated financial statements thus fully conform with the IFRS and IFRIC published by the IASB and IFRS IC to the extent that these had been adopted by the European Union at the end of the period under report and required mandatory application as of 30 September 2022.

The consolidated financial statements have been prepared as of the balance sheet date for the annual financial statements of MVV Energie AG and refer to the 2022 financial year (1 October 2021 to 30 September 2022). The consolidated financial statements are compiled in euros. Unless otherwise indicated, all amounts are stated in thousand euros (Euro 000s).

The income statement has been prepared using the total cost method. In the interests of clarity, individual line items have been presented in summarised form in the income statement and balance sheet and listed and commented on separately in the notes to the consolidated financial statements.

The Executive Board of MVV Energie AG is responsible for the preparation, completeness and accuracy of the consolidated financial statements and the combined management report. The Executive Board prepared the consolidated financial statements and combined management report on 14 November 2022 and subsequently forwarded these to the Supervisory Board for approval.

MVV's 2022 financial year was significantly influenced by a challenging energy industry and policy climate. Moreover, volatility on the energy and procurement markets has risen along with the rapid movements in prices. This had a significant impact, particularly on fair values recognised in the balance sheet and measurement items recognised for derivative financial instruments in the income statement. Procurement prices are contractually agreed, particularly for the main products of electricity and gas. MVV draws on derivative financial instruments to hedge the risk of any increase in the company's procurement costs. MVV is not exposed to any material risks in connection with open positions or open volumes to be covered on the market. In view of this, no provisions for pending losses have been recognised in this respect. Allowances for receivables depend on customers' payment behaviour, taking due account of the macroeconomic situation. The development in sales and the cost of materials in the financial year and in future will be significantly influenced by the development in wholesale prices, particularly for electricity and gas.

Changes in accounting policies

The International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRS IC) have revised or newly adopted some standards and interpretations which require mandatory application for the first time in the 2022 financial year. These standards and interpretations did not have any material implications for MVV.

The IASB and the IFRS IC have published standards and interpretations not yet requiring mandatory application in the 2022 financial year and of which no voluntary premature application has been made. These standards and interpretations are not expected to have any material implications for MVV.

Consolidation methods

The financial statements included in consolidation have been prepared on the basis of uniform accounting policies as of 30 September 2022.

Subsidiaries are fully consolidated upon acquisition, i.e. from the time when the Group gains control. Their inclusion in the consolidated financial statements therefore ends when they are no longer controlled by the parent company. Capital consolidation is based on the purchase method. Non-controlling interests held in the earnings and net assets of fully consolidated companies are not attributable to the Group. In the consolidated balance sheet, they are recognised within equity, separately from equity attributable to shareholders in the parent company. Subsidiaries that due to materiality considerations have not been fully consolidated in MVV's consolidated financial statements have been reported under other majority shareholdings.

Interests in associates and joint ventures are consolidated using the equity method.

Shareholdings in companies not included by way of full consolidation or by application of the equity method have been accounted for in accordance with IFRS 9.

Receivables and liabilities between consolidated companies are offset against each other, as are income and expenses. Material intercompany results have also been eliminated.

Scope of consolidation and changes in scope of consolidation

In addition to MVV Energie AG, all material German and foreign subsidiaries in which MVV Energie AG directly or indirectly holds a majority of the voting rights have been included in MVV's consolidated financial statements. Furthermore, subsidiaries at which contractual provisions result in control by MVV are included in the consolidated financial statements irrespective of whether MVV holds a majority of voting rights.

Scope of consolidation

	Companies fully consolidated	Companies recognised at equity
1 October 2021	133	35
Additions	9	5
Disposals	11	8
30 September 2022	**131**	**32**

In the 1st quarter of 2022, MVV Enamic GmbH, Mannheim, a fully consolidated company within the MVV Group, acquired 100 % of the shares in the companies Avantag Energy S.a.r.l. (Avantag), Wecker, Luxembourg, and Philipp Rass Energy GmbH (PRE), Trier. This resulted in the full consolidation of both companies. Avantag plans, projects and installs photovoltaics systems with a focus on the German and Luxembourg markets, while PRE offers maintenance and repair services. MVV took over the two companies to better satisfy growing demand for photovoltaics products and exploit synergy effects. These particularly apply to the joint development of on-site power purchase agreements, photovoltaics lease solutions and cross-selling potential. The existing activities of both companies have been identified and recognised by way of purchase price allocations. Given the market climate and regulatory environment, with factors such as the obligation to install photovoltaics in new buildings, rising energy prices and the efforts made by business customers to achieve energy independence, we expect to see substantial growth. This expectation is reflected in a high volume of goodwill.

The fair values of the assets and liabilities identifiable upon the full consolidation of Avantag and PRE are presented in the following table. The preliminary acquisition costs of Euro 32,452 thousand (Avantag) and Euro 1,486 thousand (PRE) correspond to the total of the fair value of net assets thereby acquired and goodwill and were settled in cash. The receivables recognised upon acquisition do not include any allowances. The costs of Euro 274 thousand associated with the two business combinations have been recognised as advisory expenses. These include due diligence expenses and advisory services drawn on to determine the fair value of net assets acquired pursuant to IFRS.

Identifiable assets and liabilities

	Avantag Energy S.a.r.l.	Philipp Rass Energy GmbH
Euro 000s	Recog-nised upon acquisition	Recog-nised upon acquisition
Intangible assets	2,333	–
Property, plant and equipment	43	145
Right-of-use assets	832	355
Other financial assets	182	–
Trade receivables	3,016	190
Inventories	1,320	25
Other receivables and assets	2,880	31
Cash and cash equivalents	1,950	12
Deferred tax assets	496	–
Provisions	934	16
Trade payables	2,505	53
Financial debt	832	423
Other liabilities	2,855	150
Deferred tax liabilities	827	–
Fair value of net assets	**5,099**	**116**
Acquired share of net assets	**5,099**	**116**
Goodwill	27,353	1,370

Since being fully consolidated, Avantag and PRE have contributed sales of Euro 30,839 thousand and earnings of Euro – 1,397 thousand. If the two companies had already been included in the Group as of 1 October 2021, they would have contributed sales of Euro 41,118 thousand and earnings of Euro – 1,863 thousand.

Additions to fully consolidated companies also include companies newly added due to the change in status of other majority shareholdings, mainly relating to project companies in the Juwi subgroup. Due to materiality considerations, these now require full consolidation.

Material disposals from fully consolidated companies relate to the sale of the three companies Mobiheat GmbH, Friedberg (Bavaria), Mobiheat Schweiz GmbH, Dietlikon, Switzerland, and Mobiheat Österreich GmbH, Sankt Lorenz, Austria. The remaining changes involve mergers and one liquidation.

Additions to companies recognised at equity relate to the acquisition of SWT Solar GmbH, Trier, and AvanLog Solar GmbH, Munich, and to the foundation of Solventus GmbH and Solventus GmbH & Co. KG, both in Kiel. The company GeoHardt GmbH, Schwetzingen, which was founded in the previous year, was also added to MVV's scope of consolidation in the current financial year. This was due to the inclusion of its parent company, MVV Grüne Wärme GmbH, Mannheim, as a fully consolidated company in the current financial year.

Disposals mainly involve the sale of the following at-equity companies: Main DC Offenbach GmbH, Main DC Asset GmbH, both in Offenbach am Main, Enerix Franchise GmbH & Co. KG and Enerix Management GmbH, both in Regensburg. Furthermore, disposals also include at-equity companies disposed of at the Juwi subgroup.

Currency translation

Foreign currency transactions are recognised at the spot rate applicable at the time the consolidated companies executed the transaction. Monetary assets and liabilities stated in foreign currencies are translated at each balance sheet date at the reporting rate. Consistent with the respective allocation, currency translation differences are recognised either in earnings from operations or the financial result.

Annual financial statements of foreign group companies are translated into euros (the reporting currency of the Group) in accordance with the functional currency concept and using the modified reporting date method. MVV determines the functional currency for each of its companies. Assets and liabilities are translated from their respective national currencies into euros at the mean exchange rate valid on the balance sheet date. Income and expense items are translated using annual average exchange rates. Currency differences resulting from the use of different exchange rates for the balance sheet and the income statement are recognised directly in equity under accumulated other comprehensive income (currency translation differences).

Currency translation has been based on the following main exchange rates:

Currency translation

1 Euro	Reporting date rate 30 Sep 2022	 30 Sep 2021	Average rate 1 Oct 2021 to 30 Sep 2022	 1 Oct 2020 to 30 Sep 2021
Czech crown (CZK)	24.549	25.495	24.817	25.969
British pound (GBP)	0.883	0.861	0.847	0.874
US dollar (USD)	0.975	1.158	1.084	1.195
South African rand (ZAR)	17.535	17.563	17.131	17.731

Source: European Central Bank

Accounting policies

Assets and liabilities are measured at amortised cost in all cases apart from certain assets, liabilities and derivative financial instruments which IFRS 9 or another relevant standard require to be measured at fair value where this can be reliably determined. Non-current receivables and debt are initially recognised at present value. Assets and liabilities are netted where the relevant requirements are met. Income and expenses derived from assets and liabilities are recognised under earnings from operations or in the financial result depending on the respective balance sheet item. Period deferrals are accounted for where necessary. Items are recognised directly in equity when required by International Accounting Standards and are presented separately in the statement of changes in equity.

The underlying principles of recognition and measurement applied in the preparation of MVV's consolidated financial statements are set out below.

Intangible assets

Intangible assets were predominantly acquired in return for payment and are carried at cost, reduced where appropriate by subsidies received. They are subject to straight-line amortisation based on their pattern of consumption. Scheduled amortisation is based on the following useful lives which are guided by economic considerations or contractual conditions:

Useful lives in years

Concessions	5 – 50
Industrial property rights and patents	1 – 25
Customer contracts and customer lists	2 – 23
Software and software licences	1 – 40
Other intangible assets	1 – 40

With regard to the useful lives of intangible assets, the asset schedules at the group companies include special items at the upper and lower ends of the respective ranges. With the exception of goodwill, there are no material intangible assets with useful lives classified as indefinite. Where MVV has to purchase CO_2 emission rights with holding periods longer than one year, these are recognised as intangible assets at cost. Rights allocated free of charge are recognised at Euro 0. As the CO_2 emission rights constitute non-amortisable assets, they are not written down but, pursuant to IAS 36, nevertheless reduced by any impairment losses. Development costs are recognised as intangible assets if the following criteria are met:

- The completion of the asset is technically feasible, so that it will be available for use or sale.
- The management has the intention to complete the asset so that it will be available for use or sale.
- The company has the ability to use or sell the asset.
- The company can demonstrate how the asset will generate probable future economic benefits.
- Adequate technical, financial and other resources are available to complete development and to use or sell the asset.
- The expenditure attributable to the asset during its development can be reliably measured.

Directly allocable costs that are capitalised include employee expenses and a commensurate share of relevant overheads. Capitalised development costs are amortised from the time at which the asset is available for use. Research and development expenses that do not satisfy the aforementioned criteria are recognised as expenses in the income statement. Development costs previously expensed are not recognised as assets in subsequent periods.

Property, plant and equipment

Property, plant and equipment is stated at cost, less proportionate depreciation to account for the decline in value of the assets. In the case of internally generated property, plant and equipment, the costs of manufacture are based on allocable direct costs and a commensurate share of directly allocable overhead expenses. Borrowing costs are recognised as a component of costs when they can be directly attributed to the acquisition or manufacture of a qualifying asset. Such costs are recognised as soon as the asset in question requires a significant period of time to be prepared for its intended use or sale. During the commissioning phase, the net balance of income and expenses incurred is capitalised.

The cost of assets is reduced by public subsidies received (investment grants). Public subsidies are recognised when it is sufficiently certain that these will be granted and the relevant conditions have been met. Investment grants relate exclusively to asset-based subsidies. These grants are reported separately from investments in the non-current asset schedule.

Items of property, plant and equipment are subject to straight-line depreciation consistent with their pattern of consumption. Depreciation is recognised on a time-apportioned basis in the year of addition. Scheduled depreciation is based on the following useful lives:

Useful lives in years	
Buildings	4 – 100
Technical equipment and machinery	4 – 55
Transmission grids	5 – 69
Plant and operating equipment	1 – 50

With regard to the useful lives of tangible assets, the asset schedules at the group companies include special items at the upper and lower ends of the respective ranges.

Investment properties

Investment properties are measured at amortised cost. In the context of impairment tests, their fair values are regularly determined by way of independent surveys. As these do not constitute observable market prices, measurement is allocable to Level 3 of the IFRS 13 measurement hierarchy.

Impairment test of intangible assets, property, plant and equipment and investment properties

The carrying amounts of intangible assets, property, plant and equipment and investment properties are assessed for indications of impairment at each balance sheet date. An impairment test pursuant to IAS 36 is performed if there are any such indications. Goodwill and intangible assets with indefinite useful lives are not subject to scheduled amortisation but are rather tested for impairment at least once a year. This also applies when changes in circumstances or indications of impairment arise.

If the carrying amount of an asset is higher than its recoverable amount (the higher of its fair value less disposal costs or its value in use), the carrying amount is written down to the recoverable amount. The fair value represents the best estimate of the recoverable amount. The recoverable amounts must be determined for each individual asset, unless the asset does not generate any largely independent cash flows. In this case, the amount for which an independent third party would acquire the cash generating unit at the balance sheet date is stated. The fair values/values in use of the cash generating units are determined on the basis of cash flow forecasts approved by the management and supervisory bodies of MVV Energie AG. Such cash flow forecasts are based on experience and results in previous financial years, as well as on expectations as to future market developments. They refer to the expected development in key macroeconomic figures derived from economic and financial studies. Key assumptions used in the forecasts concern the development in the price of crude oil, natural gas and coal on global markets, the price of electricity and gas on wholesale and end consumer markets and the development in market shares and the relevant regulatory framework.

The cash flow forecasts cover a detailed budgeting period of three years. Figures for subsequent financial years are based on an extrapolation of the results of the final financial year in the detailed budget period. Reference is made to current estimates of growth rates. These correspond to the average long-term growth rates in the markets in which the companies operate and are consistent with external sources of information concerning market expectations. Impairment losses are recognised when the recoverable amount of the asset falls short of its carrying amount. Write-ups are recognised if the reasons for impairment losses recognised in the past no longer apply and the recoverable amount of the asset exceeds its carrying amount in an impairment test. Assets are written up to a maximum of amortised cost.

Goodwill is not written up. If the carrying amount of a cash generating unit to which goodwill has been allocated exceeds its recoverable amount, then the goodwill thereby allocated is written down first. Any further write-down requirement is then accounted for by means of a prorated reduction in the carrying amounts of the other assets at the cash generating unit. However, assets are not written down below their respective present values.

Receivables and other assets

Receivables and other assets include trade receivables, as well as financial and non-financial receivables and assets.

Further information about financial and non-financial receivables and assets can be found in the notes to financial instruments.

CO_2 emission rights with remaining terms of less than a year and requiring purchase or exchange by MVV are recognised at cost as other assets, while rights allocated free of charge have been recognised at Euro 0.

Inventories

Inventories comprise raw materials and supplies, unfinished and finished products and services and projects rights, advance payments made for such and gas holdings. They are measured at the lower of cost or net sale value. Costs of acquisition or manufacture for raw materials and supplies are calculated using the average cost method. The manufacturing costs of unfinished and finished products and services and project rights comprise production-related full costs. These consist of allocable direct costs and a commensurate share of the material and production overheads required based on normal capacity utilisation rates. Risks resulting from impaired utility are accounted for with suitable deductions.

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and credit balances at banks with original terms of less than three months.

Non-current assets and liabilities held for sale

Non-current assets which can be sold in their current state and whose sale is highly probable are recognised as non-current assets held for sale. Liabilities due to be dispensed with in a transaction together with assets are reported separately as liabilities held for sale. Unless the relevant specific standards are applicable, non-current assets held for sale are no longer subject to scheduled depreciation and amortisation. Unless stipulated in another standard, they are measured at fair value less expected disposal costs, where this is lower than the carrying amount. Gains or losses from the measurement of individual non-current assets held for sale or disposal groups are recognised under earnings from continuing operations until their ultimate disposal.

Gains or losses from the measurement of discontinued operations and from specific assets within a discontinued operation are recognised separately under earnings from discontinued operations in the income statement. The previous year's figures in the income statement are adjusted accordingly. The relevant assets and liabilities are recognised in the aforementioned separate line items in the balance sheet. In the cash flow statement, the cash flows from discontinued operations are recognised separately, as are the previous year's figures. In the balance sheet, by contrast, the previous year's figures are not adjusted.

Deferred taxes

Deferred taxes are stated for temporary differences between the tax balance sheets and IFRS balance sheets at individual companies arising from the measurement of assets and liabilities for tax purposes on the one hand and for external IFRS accounting on the other, as well as from consolidation process impacting on earnings. Any surplus of deferred tax assets from temporary differences is only recognised if it is recoverable. Moreover, deferred tax assets are also recognised for tax reduction claims resulting from the expected utilisation in subsequent years of existing losses carried forward. Such claims are only capitalised if the utilisation of these losses carried forward is certain within a maximum forecast horizon of five years based on existing business plans. Deferred taxes are calculated by reference to the tax rates valid or expected at the individual organisational units upon realisation. Account is taken of the tax regulations valid or already adopted at the balance sheet date.

Provisions

Provisions are recognised for all legal or constructive obligations to third parties at the balance sheet date as a result of past events, when it is probable that a future outflow of resources will be required to settle the obligations and the amounts can be reliably estimated. Provisions are recognised at their expected settlement amounts and are not netted with refund claims. Provisions based on a large number of events of the same nature are recognised at the expected value of the potential outcomes.

All non-current provisions are recognised at their expected settlement amounts as of the balance sheet date. Non-current provisions are discounted.

Leases

Application is made of the right-of-use model for leases recognised at the lessee. Leases are recognised as right-of-use assets and corresponding lease liabilities from the time when the leased item is available for use by the Group. One exception involves contracts with terms of less than twelve months and leases for which the underlying asset is of low value. The lease payments associated with these leases are expensed on a straight-line basis over the term of the lease. Each lease instalment is divided into principal repayments and financing expenses. Financing expenses are charged to earnings over the term of the lease. The right-of-use asset is subject to straight-line depreciation over the shorter of its useful life and the term of the lease contract. Upon initial recognition, lease-related assets and liabilities are measured at present value. Lease payments are discounted at the interest rate implicit in the lease, if this can be determined, and otherwise using the lessee's incremental borrowing rate.

Lease liabilities refer to buildings, various items of technical equipment and plant and operating equipment. Vehicle leases make up the largest share of leases. Further material leases apply for office buildings, CHP units, district heat storage facilities, storage sites and licence agreements permitting the use of agricultural land and needed to operate wind turbines and associated infrastructure. Lease liabilities include the present value of the following payments not yet made as of the provision date for the right to use such assets:

- Fixed payments less any receivable lease incentives
- Variable lease payments dependent on an index or interest rate
- Expected residual payments from residual value guarantees provided by the lessor
- The exercise price for a purchase option when the lessee is reasonably certain to exercise the option
- Penalties for the termination of the lease when the term already accounts for the possibility of the lessee exercising a termination option.

Some lease contracts include extension and termination options. Contractual components and conditions of this kind provide the Group with maximum operating flexibility. In determining the terms of the contracts, the management takes due account of all facts and circumstances which offer an economic incentive to exercise termination options. Changes of terms due to the exercising or otherwise of such options are only accounted for in the term of the contract when they are reasonably certain.

Lease contracts for operating leases in which the Group acts as the lessor are recognised through profit or loss on a straight-line basis over the term of the lease. For finance leases, however, the lessor does not count as the economic owner, as a result of which the leased item is derecognised upon the commencement of the lease. The lessor then recognises a receivable in the amount of all lease payments not yet received, including any residual value guarantee, and discounted by the interest rate implicit in the lease. Over the term of the finance lease, the lessor increases the lease receivable through profit or loss for interest income and reduces it in equity by the amount of principal payments received from the lessee.

Financial instruments

Primary financial instruments: Financial assets, such as shares and shareholdings, loans, securities, trade receivables and payables, other cash receivables and cash and cash equivalents, are measured at fair value upon addition. Upon subsequent measurement, financial assets are recognised either at fair value or at amortised cost. In the case of subsequent measurement at amortised cost, transaction costs are distributed over the term of the financial instrument using the effective interest method. In other cases they are expensed directly.

The fair values of financial instruments traded on organised markets are determined by reference to their market price at the balance sheet date. The fair values of financial instruments for which there is no active market are estimated with due application of valuation techniques. These methods are based on recent transactions performed on customary market terms, on the current value of other instruments which are essentially the same instruments, on analysis of discounted cash flows or on option price models. Pursuant to IFRS 13, due account is taken of market and credit risks when determining fair values.

Subsequent recognition is determined by the contractual cash flow characteristics and the objectives of the business model in which the financial instruments are held. If the contractual cash flow characteristics of a financial instrument solely comprise payments of principal and interest, the instrument may be recognised at amortised cost using the effective interest method if the business model involves collecting contractual payments from the debtor. If, alongside the collection of contractual cash flows, the business model also involves the possibility of selling the financial instrument, then developments in the fair value of the financial instrument over and above effective interest are recognised in other comprehensive income. In recognising fair value changes in other comprehensive income, due account is taken of deferred taxes. Other business models lead to the recognition of the financial instrument at fair value through profit or loss, particularly when the contractual cash flow characteristics also comprise payments other than principal and interest. Based on their cash flow characteristics, only debt instruments qualify for irrevocable allocation to one of the aforementioned business models upon initial recognition. Any equity instruments held are generally recognised at fair value through profit or loss. If they are held without any intention to trade, the development in the fair value of the equity instrument may be presented through other comprehensive income, taking due account of deferred taxes, but may not be reclassified to the income statement upon disposal.

For financial instruments that are subject to the effective interest method, impairments that are already expected are recognised in accordance with the expected credit loss model. In the general approach, loss allowances are determined such that a distinction is made as to whether or not the default risk of a financial asset has deteriorated significantly since initial recognition. If the default risk has not changed, the loss allowance is determined on the basis of the potential loss event in the next twelve months (12-month expected loss). In the event of a significant deterioration in the default risk that can no longer be classified as low, the loss allowance is based on the lifetime expected credit loss of the financial instrument. In the simplified approach, by contrast, the loss allowance is directly based on lifetime expected credit losses. Alongside trade receivables, lease receivables and contract assets for customer contracts also require application of the simplified approach. Impairments are recognised directly in period earnings and may directly change the carrying amount of the financial instrument or be presented in an allowances schedule.

Purchases and sales of financial assets executed on customary market terms are recognised on the date of the transaction, i.e. on the date on which the company assumed the liability to purchase or sell the assets. Purchases and sales executed on customary market terms require transfer of the assets within a period determined by market regulations or conventions.

Financial assets are retired when the contractual rights to cash flows from the asset expire or when the financial asset is transferred, provided that substantially all the risks and rewards incidental to ownership of the asset are transferred and the power to dispose over the asset has been ceded.

Financial liabilities, such as financial debt, trade payables and other financial liabilities are measured at amortised cost, with application of the effective interest method where appropriate. In the case of financial debt, cost is equivalent to the fair value. In the case of trade payables and other liabilities, cost is equivalent to the fair value of the consideration received.

Financial liabilities are retired when the underlying obligation has been met, terminated or has expired.

No use is made of the option of recognising financial assets and liabilities at fair value through profit or loss upon initial recognition.

Derivative financial instruments: Derivative financial instruments particularly include interest rate and currency derivatives, as well as commodity derivatives, in this case mainly for electricity, gas, coal and CO_2. Derivative financial instruments are measured at fair value both upon initial recognition and in subsequent periods and are reported under other assets or other liabilities. The amounts recognised are derived from market values or using recognised valuation methods (present value method or option pricing models based on current market parameters). In particular, certain long-term energy contracts and interest rate derivatives are, where no market prices are available, measured using recognised valuation methods based on internal fundamentals. Changes in the value of currency derivatives relating to operations are recognised as income or expenses under earnings from operations, while changes in the value of interest and currency derivatives not relating to operations are recognised as income or expenses in the financial result. Changes in the value of all other derivative financial instruments are recognised as income or expenses under other operating income and expenses. Derivatives deployed in cash flow hedges have to be treated separately. If they additionally meet IFRS 9 hedge accounting requirements, changes in the fair value of the effective portion of the hedging instrument are recognised directly in equity under fair value measurement of financial instruments. When the underlying transaction is recognised in the income statement, the hedging instrument is also recognised through profit or loss and thus compensates for the impact of the underlying transaction. Alongside cash flow hedge accounting, risks may also be hedged with fair value hedges. Here, changes in the fair values of those derivatives which serve to hedge a fair value and qualify as fair value hedges are recognised through profit or loss at the same time as the risk thereby hedged. For fair value hedges, changes in the value of primary financial instruments arising due to exchange rate movements may additionally be hedged by the currency-related changes in other primary financial instruments or currency derivatives. Fair value hedges are designated for closed foreign currency positions.

Energy trading contracts intended to hedge future commodity purchases and sales may be in the scope of IFRS 9. Financial energy trading contracts are recognised as derivative financial instruments. They are either designated as hedging instruments for cash flow hedge relationships or recognised as standalone derivatives. For physical energy trading contracts, a decision has to be taken as to whether they should be treated as derivative financial instruments pursuant to IFRS 9 or whether application is to be made of the own-use exemption. Other energy trading transactions are designated as all-in-one cash flow hedge relationships and recognised as standalone derivatives.

Energy trading contracts intended to hedge future electricity price risks for proprietary generation plants are in the scope of IFRS 9. They are designated as hedging instruments for a fair value hedge relationship.

Energy trading contracts held for trading or concluded in connection with the overall risk management for all energy trading contracts are in the scope of IFRS 9. Gains and losses from these energy trading contracts are netted and recognised either as other operating income or as other operating expenses.

Interest swaps intended to hedge future interest rate risks are in the scope of IFRS 9. They fix the future interest payments for floating-rate financial liabilities and are designated as hedging instruments for cash flow hedge relationships.

Developments in the fair value of those components of a hedging instrument that are not designated as hedging a risk from a hedged item may be recognised as hedging costs in other comprehensive income and reversed upon recognition of the hedged item through profit or loss.

Discretionary decisions in the application of accounting policies

Discretionary decisions have to be made when applying accounting policies. This has not materially influenced the values of the assets and liabilities reported in the financial statements.

The items and transactions presented in the consolidated financial statements also regularly trigger tax charges in the form of taxes on income or other types of tax. To avoid uncertainties resulting from tax risks, the items and transactions are regularly structured in line with valid statutory requirements and their interpretation in practice.

For assets due to be sold, a decision has to be taken as to whether these can be sold in their current state and whether such sale is highly likely within the next 12 months. If both are the case, the assets and any associated liabilities have to be recognised and measured as “Assets and liabilities held of sales.

Measurement uncertainties

The preparation of consolidated financial statements in accordance with IFRS requires assets and liabilities to be measured. Here, it is also necessary to make assumptions and estimates which could impact on the values stated for the assets and liabilities, income and expenses thereby recognised and the disclosure of contingent liabilities.

The following section provides information on the most important prospective assumptions and other major sources of uncertainty involved in estimates made at the balance sheet date, as a result of which there is a risk that material adjustments will be required in the carrying amounts of assets and liabilities in the next financial year.

The fair values of assets and liabilities and the useful lives of assets have been determined on the basis of management assessment. The same applies to the calculation of any impairments of assets.

The impairment test performed on goodwill and assets requires an estimation of the recoverable amount of the cash generating unit to which the goodwill or asset is allocated. The recoverable amount is the higher of the fair value, less disposal costs, of the cash generating unit and its value in use. This is compared with the carrying amount. To estimate the recoverable amount, MVV has to estimate the cash flow surpluses expected to be generated by the cash generating unit in future and furthermore to select an appropriate discount rate to calculate the present value of the cash flows. All assumptions and estimates are based on circumstances and assessments at the balance sheet date or at the relevant date in the financial year on which event-specific impairment becomes necessary. Any deviation in underlying conditions could result in differences arising between such estimates and actual values. Appropriate amendments are made in such cases to the assumptions and, if need be, to the carrying amount of the goodwill and assets. Moreover, assumptions also have to be made when calculating actual and deferred taxes. In particular, the possibility of generating corresponding future taxable income plays a key role in the assessment as to whether it will be possible to use deferred taxes.

The uncertainties arising when measuring the provisions to be recognised have been countered by applying the best possible estimates based, among other methods, on probability considerations.

The measurement of sales and cost of materials is dependent on estimates to the extent that consumption deferrals have been undertaken as of the balance sheet for trade receivables and trade payables already incurred but not yet invoiced.

When assessing measurement uncertainties, reference is always made to the best information available concerning circumstances at the balance sheet date. Actual amounts may differ from estimates. The carrying amounts recognised in the financial statements which are subject to these uncertainties have been stated in the balance sheet and the accompanying information provided in the notes.

NOTES TO INCOME STATEMENT

1. Sales less electricity and natural gas taxes

Sales include all revenues generated by the Group's typical business activities. MVV's main products are electricity, heat, gas, water and waste treatment and disposal. The Group also generates significant revenues from services and solar and wind power project development. Revenues from contracts with customers are generally recognised upon delivery to the customer or upon performance of the services for the customer. Delivery is deemed complete when control has been transferred to the customer and consideration is unconditional except for the passage of time. If consideration is conditional on something other than the passage of time, the respective clams are recognised as contract assets. If consideration received is higher than the services performed, a contract liability is recognised.

If one party is mainly responsible for performing the contract, no inventory and default risks are assumed, MVV cannot influence the pricing and remuneration takes the form of a commission payment, then MVV acts as an agent. In this context, the respective sales and cost of materials are netted, leading to an equivalent reduction in income and expenses. The impact of netting is dependent on the future market premium and compensation paid under renewable energies legislation. In the case of feed-in remuneration, the grid operator accepts the electricity from plant operators and makes this available to the transmission grid operator, which in turn markets it on the energy exchange.

The overwhelming share of revenues from contracts with customers is performed over a period of time. The percentage of completion is generally determined using the output method. In some cases, application is also made of the input method. Here, however, it is necessary to document that this method also corresponds to the transfer of control.

Revenues from contracts with customers result from the transaction prices allocated to the respective products and services. These correspond to the value of units delivered, including estimated deferrals for units not yet read or billed as of the balance sheet date.

The average payment target usually amounts to between 14 and 30 days.

The composition of sales broken down into individual segments can be found in Segment Reporting in Note **37.**

Sales from contracts with customers (external sales) are broken down by product and presented in the following table:

Sales by product group

Euro 000s	**FY 2022**	FY 2021
Electricity	3,208,871	2,086,418
Heat	437,633	390,820
Gas	1,228,810	774,875
Water	90,766	90,064
Other sales	957,508	891,611
	5,923,588	**4,233,788**

Timing of sales recognition

Euro 000s	**FY 2022**	FY 2021
Sales recognised over time	5,734,066	3,993,118
Electricity	3,208,871	2,086,418
Heat	437,633	390,820
Gas	1,228,810	774,875
Water	90,766	90,064
Other sales	767,986	650,941
Sales recognised at a point in time	189,522	240,670
Project development	189,522	240,670
	5,923,588	**4,233,788**

Other sales (sales by product group) mainly include revenues from waste incineration, operations management services and other sales in business fields that do not form part of MVV's core business.

Project development sales include sales from the development and the functional and turnkey construction of wind power and photovoltaics projects. In most cases, the investor becomes involved after completion of the projects by acquiring shares in a project company. The respective sales are therefore recognised at a point in time. Sales of Euro 105,957 thousand were recognised in the current financial year for items that were included in net contract liabilities at the beginning of the period under report (previous year: Euro 78,344 thousand).

In group currency, sales at our foreign subsidiaries came to Euro 310, 621 thousand (previous year: Euro 348,217 thousand). The reduction in this share of sales is chiefly due to a lower number of projects realised abroad.

2. Changes in inventories

Changes in inventories mainly relate to unfinished projects and project rights.

3. Own work capitalised

Own work capitalised relates above all to the construction and expansion of distribution grids.

4. Other operating income

Other operating income

Euro 000s	FY 2022	FY 2021
Income from derivative financial instruments	4,634,560	1,223,996
Exchange rate gains	12,226	3,747
Agency agreements and personnel supplies	9,079	8,572
Reversal of provisions	8,741	23,612
Rental income	5,726	5,874
Reimbursements	4,837	19,636
Income from sales of assets and write-ups	3,357	3,566
Operating taxes (including energy taxes)	1,305	21,428
Miscellaneous	22,552	19,715
	4,702,383	**1,330,146**

Other operating income particularly includes measurement items for derivative financial instruments. This valuation-dependent income is countered by other operating expenses. The marked year-on-year increase in this item is due to significant movements in market prices and the resultant rise in the fair values of energy trading transactions requiring measurement under IFRS 9.

Reimbursements include refunds of costs for insurance policies and contractual penalties.

The income from operating taxes mainly relates to refunds of energy taxes.

Miscellaneous other operating income includes large numbers of other business transactions and income, such as income from services to employees, recoveries and dunning charges.

Undiscounted income recognised for future lease payments is broken down into its respective maturities and presented in the following table. There are no variable lease payments not linked to an index or interest rate.

Future income from operating lease payments

Euro 000s	FY 2022	FY 2021
Minimum lease payments with maturities < 1 year	2,445	2,462
Minimum lease payments with maturities > 1 year and < 5 years	7,542	5,047
Minimum lease payments with maturities > 5 years	20,380	12,805

5. Cost of materials

Cost of materials

Euro 000s	FY 2022	FY 2021
Raw materials, supplies and purchased goods	4,515,565	2,523,220
Procurement of wind turbines and solar power systems	142,370	184,796
Purchased services	625,976	611,994
	5,283,911	**3,320,010**

Expenses for purchased services mainly relate to expenses for grid utilisation fees, concession duties, maintenance and repair expenses, disposal costs for residual waste and other third-party services.

6. Employee benefit expenses

Employee benefit expenses

Euro 000s	FY 2022	FY 2021
Wages and salaries	414,967	396,471
Social security expenses and welfare expenses	71,933	68,015
Pension expenses	23,867	22,815
	510,767	**487,301**

MVV had an annual average of 6,517 employees (previous year: 6,344). This total includes 10 executives (previous year: 10), 6,167 employees (previous year: 5,990), 305 trainees (previous year: 308) and 35 interns/students (previous year: 35).

The executives are members of the management in key functions, i.e. authorised representatives and division heads at MVV Energie AG.

7. Other operating expenses

Other operating expenses

Euro 000s	**FY 2022**	FY 2021
Expenses for derivative financial instruments	4,506,589	899,054
Contributions, fees and duties	38,901	34,302
Expenses for advisory services	31,245	31,809
Maintenance, repair and IT services	21,637	20,170
Rental, leasehold and leasing expenses	17,812	16,227
Operating taxes (including energy taxes)	14,695	36,419
Public relations expenses	14,049	9,389
Other services	12,488	13,111
Other employee-related expenses	12,039	8,928
Exchange rate losses	11,607	2,490
Miscellaneous	32,579	28,259
	4,713,641	**1,100,158**

Other operating expenses particularly include negative measurement items for derivative financial instruments. These valuation-dependent expenses are countered by other operating income. The marked year-on-year increase in this item is due to significant movements in market prices and the resultant rise in the fair values of energy trading transactions requiring measurement under IFRS 9.

The expenses for operating taxes mainly include expenses for energy taxes relating to energy consumption.

Miscellaneous other operating expenses include large numbers of other business transactions and expenses, such as expenses for office material, vehicle pool costs (except leasing) and subsidy and sales promotion expenses.

8. Income from companies recognised at equity and other income from shareholdings

Interests in associates and joint ventures are recognised initially at cost and subsequently at the amortised value of the prorated net assets. The carrying amounts are increased or reduced annually to account for prorated earnings, dividends paid and other changes in equity. Any goodwill thereby recognised is included in the value of the shareholdings, rather than being reported separately. Impairment losses are recognised on the at-equity carrying amount when the recoverable amount falls short of the carrying amount. When the reasons for impairment losses previously recognised on the at-equity carrying amount no longer apply, the carrying amount is correspondingly written up through profit or loss.

Income from companies recognised at equity and other income from shareholdings

Euro 000s	**FY 2022**	FY 2021
Income from companies recognised at equity	64,513	36,167
Income from other shareholdings	766	– 2,161
Income from disposals of associates	16,784	517
	82,063	**34,523**

At Euro 39,407 thousand, the major share of the increase in income from companies recognised at equity is due to the sale of Main DC Offenbach GmbH.

Income from disposals of associates mainly results from the sale of the three companies Mobiheat GmbH, Mobiheat Schweiz GmbH and Mobiheat Österreich GmbH.

9. Depreciation and amortisation

Depreciation and amortisation

Euro 000s	**FY 2022**	FY 2021
Depreciation and amortisation	211,262	203,900
of which impairment losses	603	–

10. Financing income

Financing income

Euro 000s	**FY 2022**	FY 2021
Interest income from finance leases	3,368	3,900
Income from currency translation in connection with financing activities	18,805	4,663
Income from derivative financial instruments	26	143
Interest income from current account, overnight and fixed-term deposits	975	518
Interest income from discounting provisions and liabilities	9,113	266
Other interest and similar income	4,165	4,124
	36,452	**13,614**

The increase in income from currency translation in connection with financing activities mainly results from the translation of group-internal financing facilities denominated in foreign currencies.

The change in interest income from discounting provisions and liabilities is due to the increase in the discount rates applied.

11. Financing expenses

Financing expenses

Euro 000s	**FY 2022**	FY 2021
Interest expenses from current account, non-current and current loans	40,885	42,732
Expenses for currency translation in connection with financing activities	3,595	2,282
Expenses for derivative financial instruments	10,801	583
Compounding of provisions	1,154	920
Other interest and similar expenses	15,241	7,441
	71,676	**53,958**

The other interest and similar expenses were reduced by Euro 494 thousand as a result of the capitalisation of borrowing interest (previous year: Euro 2,287 thousand). The financing cost rates thereby assumed ranged from 1.8 % to 2.2 % in the 2022 financial year and from 1.8 % to 2.4 % in the previous year.

The increase in expenses for derivative financial instruments mainly results from the measurement of currency derivatives serving to hedge group-internal financing facilities concluded in foreign currencies.

Expenses for compounding provisions principally relate to long-term personnel provisions.

The increase in other interest and expenses is chiefly due to higher interest expenses caused by the development in margins.

12. Taxes on income

Taxes on income

Euro 000s	FY 2022	FY 2021
Current taxes	67,752	64,150
Deferred taxes	– 79,149	80,143
	– 11,397	**144,293**

Current tax expenses comprise trade and corporate income tax, including the solidarity surcharge, as well as foreign taxes on income.

Deferred taxes in Germany are calculated on the basis of tax rates applicable at individual companies. These result from the unchanged corporate income tax rate of 15 %, the unchanged solidarity surcharge of 5.5 % and the applicable trade tax rate (currently 12 % to 16 %). Equivalent calculations for foreign companies are based on the respective national tax rates. Where the requirements of IAS 12 are met, deferred tax assets and liabilities are stated on a net basis for each company or fiscal unit.

Deferred tax income is due on the one hand to tax expenses of Euro 10,048 thousand (previous year: Euro 1,202 thousand) attributable to changes in the deferred tax assets stated for losses carried forward and on the other to deferred tax income of Euro 89,197 thousand (previous year: tax expenses of Euro 78,941 thousand) attributable to the arising and/or reversal of temporary differences.

Current tax expenses were reduced by Euro 4,293 thousand by using tax losses not previously recognised (previous year: Euro 10,082 thousand). The following table presents the reconciliation of expected tax expenses with those actually reported. The tax rate applicable for the tax reconciliation amounts to 30.3 % (previous year: 30.3 %) and comprises the corporate income tax rate, the solidarity surcharge and an average trade tax rate of 14.5 % (previous year: 14.5 %).

Reconciliation of income tax expenses

Euro 000s	FY 2022	FY 2021
Earnings before taxes (EBT)	**– 770**	**489,325**
Expected tax expenses based on tax rate of 30.3 % (previous year: 30.3 %)	**– 233**	**148,265**
Deviations resulting from trade tax assessment base	1,749	1,545
Deviations from expected tax rate	3,390	– 773
Utilisation of losses, carried forward, change in write-down for losses and losses for which no deferred taxes are recognised	7,922	1,202
Non-deductible expenses	2,407	3,569
Tax-exempt income	– 20,784	– 5,009
Income from companies recognised at equity	– 4,403	– 937
Permanent differences	1,735	– 4,818
Taxes for previous years	– 3,188	1,815
Goodwill impairments	–	–
Miscellaneous	8	– 566
Effective tax expenses	**– 11,397**	**144,293**
Effective tax rate (%)	**1,480.1**	**29.5**

13. Share of earnings attributable to MVV Energie AG shareholders and earnings per share

Share of earnings attributable to MVV Energie AG shareholders and earnings per share

	FY 2022	FY 2021
Share of earnings attributable to MVV Energie AG shareholders (Euro 000s)	– 292,105	198,777
Number of shares (weighted average in 000s)	65,907	65,907
Earnings per share (Euro)	– 4.43	3.02
Dividend per share (Euro)	1.05	1.05

The total number of individual registered shares in MVV Energie AG amounts to 65,906,796.

The dividend for the 2022 financial year corresponds to the proposal made by the Executive and Supervisory Boards and is dependent on approval by the Annual General Meeting on 10 March 2023. The proposal foresees distributing a dividend of Euro 69,202 thousand. The proposals concerning the level of dividend and the appropriation of profit for the 2021 financial year were accepted by the Annual General Meeting on 11 March 2022. A dividend of Euro 69,202 thousand was distributed.

NOTES TO BALANCE SHEET

14. Intangible assets

Intangible assets include concessions, industrial property rights, customer lists and similar rights and values, goodwill and advance payments. Concessions, industrial property rights and similar rights and values chiefly comprise software, rights eligible for capitalisation and customer lists. As in the previous year, no intangible assets are subject to restrictions on disposal.

MVV performs only a low volume of research and development. The volume of research and development expenses qualifying under IFRS amounted to Euro 987 thousand in the 2022 financial year (previous year: Euro 659 thousand). Development expenses capitalised under IAS 38 came to Euro 34 thousand in the year under report (previous year: Euro 236 thousand). These mainly involve the development of a global project database for solar and wind power projects at the Juwi subgroup.

The goodwill impairment tests performed in the 2022 financial year were based on determining the recoverable amounts of the cash generating units to which goodwill was allocated. These still correspond to the legal subgroups.

Where no market prices or other binding indicators for the value of the units are available, their fair values less costs to sell are determined using discounted cash flow methods. These correspond to Level 3 measurements in the IFRS 13 hierarchy. Taking due account of corresponding expected prices from relevant and validated market forecasts, the historic cash flows of the units are extrapolated over a forecast period comprising three detailed planning years and two subsequent years and discounted using discount rates before taxes (weighted costs of capital) of 7.3 % to 10.9 % (previous year: 4.6 % to 11.3 %). A growth rate of 0.5 % has been assumed for the perpetuity included in the calculation.

Within a sensitivity analysis, the discount rate was varied by 0.5 percentage points. Due to the higher interest yield curve on the capital markets at present, the costs of capital at two cash generating units are especially sensitive. At these two units, the surplus cover of the recoverable amount stood at Euro 14,225 thousand and Euro 17,194 thousand respectively. If the discount rate after taxes were to rise by 0.3 and 0.2 percentage points respectively, with all other assumptions and parameters remaining unchanged, the carrying amounts of these two cash generating units would exceed their recoverable amounts.

The carrying amounts stated for goodwill are structured as follows:

Goodwill carrying amounts

Euro 000s	**30 Sep 2022**	30 Sep 2021
Juwi subgroup	79,076	75,144
Energieversorgung Offenbach subgroup	68,582	75,894
MVV Enamic subgroup	65,317	36,596
Windwärts subgroup	–	3,910
MVV Energie CZ subgroup	6,624	6,346
MVV Umwelt subgroup	3,080	3,082
Other subgroups	8,238	7,935
	230,917	**208,907**

Upon the merger of companies from the Windwärts subgroup into the Juwi subgroup, their goodwill was transferred to the Juwi subgroup. As an additional component of goodwill at the Juwi subgroup, this was also subject to an impairment test. Due to the sale of Mobiheat GmbH, Mobiheat Schweiz GmbH and Mobiheat Österreich GmbH, goodwill at the Energieversorgung Offenbach subgroup decreased by Euro 7,312 thousand. The addition of goodwill at the Enamic subgroup is attributable to the full consolidation of Avantag Energy s.à r.l. and Philipp Rass Energy GmbH.

Intangible assets

Euro 000s	Concessions, industrial property rights and similar rights and values	Goodwill	Advance payments	**Total**
Gross value at 1 October 2020	340,523	257,724	5,334	603,581
Change in scope of consolidation	1,362	5,444	–	6,806
Currency adjustments	1,357	624	13	1,994
Additions	3,237	–	10,467	13,704
Disposals	– 20,270	–	– 2	– 20,272
Reclassifications	3,995	–	– 3,466	529
Gross value at 30 September 2021	**330,204**	**263,792**	**12,346**	**606,342**
Amortisation at 1 October 2020	– 264,888	– 54,729	–	– 319,617
Currency adjustments	– 363	– 156	–	– 519
Scheduled amortisation	– 14,582	–	–	– 14,582
Disposals	16,198	–	–	16,198
Reclassifications	– 159	–	–	– 159
Amortisation at 30 September 2021	**– 263,794**	**– 54,885**	**–**	**– 318,679**
Net value at 30 September 2021	**66,410**	**208,907**	**12,346**	**287,663**
Gross value at 1 October 2021	330,204	263,792	12,346	606,342
Change in scope of consolidation	– 1,435	21,711	– 77	20,199
Currency adjustments	– 371	393	2	24
Additions	1,836	–	15,960	17,796
Disposals	– 58,541	–	– 33	– 58,574
Reclassifications	3,149	–	– 2,941	208
Gross value at 30 September 2022	**274,842**	**285,896**	**25,257**	**585,995**
Amortisation at 1 October 2021	– 263,794	– 54,885	–	– 318,679
Change in scope of consolidation	3,485	–	–	3,485
Currency adjustments	– 3	– 94	–	– 97
Scheduled amortisation	– 12,692	–	–	– 12,692
Impairment losses	– 339	–	–	– 339
Disposals	58,532	–	–	58,532
Amortisation at 30 September 2022	**– 214,811**	**– 54,979**	**–**	**– 269,790**
Net value at 30 September 2022	**60,031**	**230,917**	**25,257**	**316,205**

15. Property, plant and equipment

Property, plant and equipment

Euro 000s	Land, leasehold rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other assets, plant and operating equipment	Advance payments and construction in progress	**Total**
Gross value at 1 October 2020	957,055	4,871,319	187,918	321,645	6,337,937
Change in scope of consolidation	157	21,350	– 1,971	–	19,536
Currency adjustments	16,480	26,434	371	4,104	47,389
Additions	10,869	87,348	8,581	173,647	280,445
Subsidy payments received	– 1,704	– 6,877	– 18	– 1,557	– 10,156
Disposals	– 2,441	– 24,136	– 9,183	– 4,477	– 40,237
Reclassifications	60,405	203,488	2,166	– 244,815	21,244
Gross value at 30 September 2021	**1,040,821**	**5,178,926**	**187,864**	**248,547**	**6,656,158**
Depreciation at 1 October 2020	– 469,808	– 2,999,110	– 142,396	– 78	– 3,611,392
Change in scope of consolidation	–	–	694	–	694
Currency adjustments	– 5,910	– 11,883	– 284	– 8	– 18,085
Scheduled depreciation	– 22,966	– 138,995	– 9,579	–	– 171,540
Write-ups	2,015	21,428	8,855	–	32,298
Reclassifications	6	138	158	– 143	159
Depreciation at 30 September 2021	**– 496,663**	**– 3,128,422**	**– 142,552**	**– 229**	**– 3,767,866**
Net value at 30 September 2021	**544,158**	**2,050,504**	**45,312**	**248,318**	**2,888,292**
Gross value at 1 October 2021	1,040,821	5,178,926	187,864	248,547	6,656,158
Change in scope of consolidation	–	– 9,471	– 1,494	–	– 10,965
Currency adjustments	1,152	– 181	177	151	1,299
Additions	2,472	70,653	7,950	208,803	289,878
Subsidy payments received	– 1,014	– 17,612	– 33	–	– 18,659
Disposals	– 4,181	– 29,951	– 15,884	– 2,385	– 52,401
Reclassifications	13,607	88,553	2,543	– 103,086	1,617
IFRS 5 reclassifications	– 1,047	–	–	–	– 1,047
Gross value at 30 September 2022	**1,051,810**	**5,280,917**	**181,123**	**352,030**	**6,865,880**
Depreciation at 1 October 2021	– 496,663	– 3,128,422	– 142,552	– 229	– 3,767,866
Change in scope of consolidation	–	2,104	723	–	2,827
Currency adjustments	– 1,753	– 2,704	– 141	– 9	– 4,607
Scheduled depreciation	– 25,303	– 145,770	– 9,582	–	– 180,655
Write-ups	787	1,750	155	–	2,692
Impairment losses	–	–	–	– 264	– 264
Disposals	2,408	19,300	15,672	–	37,380
Reclassifications	– 27	27	–	–	–
Depreciation at 30 September 2022	– 520,551	– 3,253,715	– 135,725	– 502	– 3,910,493
Net value at 30 September 2022	**531,259**	**2,027,202**	**45,398**	**351,528**	**2,955,387**

The property, plant and equipment presented mainly relates to internally used property, plant and equipment. In the non-current asset schedule, distribution grids are allocated to the technical equipment and machinery category.

No property, plant and equipment was provided as security for financial debt in the 2022 financial year. The financial debt for which property, plant and equipment with an equivalent value of Euro 9,832 thousand was provided as security in the previous year no longer exists. Property, plant and equipment of Euro 81,966 thousand is subject to restrictions on disposal (previous year: Euro 92,303 thousand).

Subsidy payments received involve government grants received in the 2022 financial year chiefly in connection with urban planning measures for water and district heat pipelines and for combined heat and power generation. There are no conditions that have not been met or other performance uncertainties in connection with these subsidy payments.

Advance payments account for an immaterial share of advance payments and construction in progress. The largest additions to advance payments and construction in progress in the 2022 financial year include the extension and renewal of distribution grids in Kiel and Mannheim and the construction of a sewage treatment plant and district heat backup plant in Mannheim.

Property, plant and equipment also include assets leased by MVV as the lessor within operating leases. The carrying amounts attributable to these assets as of 30 September 2022 were divided into land and buildings of Euro 9,808 thousand, technical equipment and machinery of Euro 4,793 thousand, advance payments and construction in progress of Euro 185 thousand and plant and operating equipment of Euro 161 thousand.

The income from write-ups in the 2022 financial year is due to the reasons for a historic write-down now no longer being applicable. The earnings strength of the pellet production cash generating unit in the New Energies segment performed more positively than originally assumed. The management saw this as indicating a need to perform an impairment test on this cash generating unit. This confirmed the increase in earnings strength. The future values in use were determined using a discount rate of 5.1 % after taxes.

16. Leases as lessee

The development in right-of-use assets recognised in connection with leased items is presented in the table below:

Right-of-use assets

Euro 000s	Land and buildings	IT hardware and software	Vehicles	Technical equipment and machinery	Plant and operating equipment	Other leased items	**Total**
Opening balance at 1 October 2021	122,719	1,175	5,656	25,124	16	133	154,823
Depreciation and amortisation	– 11,684	– 566	– 2,764	– 2,174	– 10	– 115	– 17,313
Additions	14,038	281	3,130	941	16	19	18,425
Other changes	– 5,437	– 1	– 1,150	– 3,934	–	– 2	– 10,524
Closing balance at 30 September 2022	**119,636**	**889**	**4,872**	**19,957**	**22**	**35**	**145,411**

Further disclosures about the leases recognised in MVV's capacity as lessee are presented in the following table:

Disclosures on leases (as lessee)

Euro 000s	FY 2022	FY 2021
Interest expenses for lease liabilities	3,986	4,170
Outflow of cash for leases	17,468	19,325
Expenses for short-term leases	1,048	1,365
Expenses for low-value leases	3,481	721
Expenses for variable lease payments	74	354
Income from sub-lease arrangements	85	–

With regard to future lease payments, the windfarms in some cases face risks resulting from variable leasehold payments that are dependent on the amount of feed-in revenues. Further risks involve future developments in consumer price indices, to which lease payments are in some cases linked.

MVV has only one sale and leaseback transaction, which was concluded in the past in order to procure liquidity. The outflow of funds for this transaction, involving the deployment of an ERP system, amounted to Euro 77 thousand in the period under report.

17. Investment properties

Investment properties involve a piece of land let out in the USA. Rental income amounted to Euro 101 thousand in the 2022 financial year (previous year: Euro 33 thousand). As in the previous year, direct operating expenses amounted to Euro 0 thousand. The fair value of investment properties is at least equivalent to the carrying amount.

Investment properties

Euro 000s	FY 2022	FY 2021
Gross value at 1 October	2,451	2,424
Currency adjustments	460	27
Gross value at 30 September	**2,911**	**2,451**
Depreciation at 1 October	–	–
Depreciation at 30 September	**–**	**–**
Net value at 30 September	**2,911**	**2,451**

18. Joint ventures

MVV operates joint ventures with partners. In view of their size and their influence on the Group, the following companies have been identified as material joint ventures:

Grosskraftwerk Mannheim AG operates what is one of Europe's most efficient hard coal-fired power plants in Mannheim. Overall, MVV owns a 28 % share of the capital in this company. Grosskraftwerk Mannheim AG is a power plant jointly owned by the following shareholders: RWE Generation SE, Essen, EnBW Energie Baden-Württemberg AG, Karlsruhe, and MVV RHE GmbH, Mannheim.

Stadtwerke Ingolstadt is responsible for the energy supply in the Ingolstadt region. MVV Energie AG owns a 48.4 % share of the capital in Stadtwerke Ingolstadt Beteiligungen GmbH which, as the financial holding company, pools several subsidiaries. All significant decisions have to be taken jointly by the shareholders.

The assets, liabilities, equity, sales, annual net income and other comprehensive income at material joint ventures are presented in the following tables:

Statement of comprehensive income for material joint ventures

Euro 000s	Grosskraftwerk Mannheim AG, Mannheim – Financial year	Grosskraftwerk Mannheim AG, Mannheim – Previous year	Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt – Financial year	Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt – Previous year
Sales excluding energy taxes	1,007,201	531,867	219,337	200,640
Scheduled depreciation and amortisation	– 117,064	– 127,388	– 15,316	– 15,261
Interest income	–	1	74	88
Interest expenses	– 37,087	– 37,868	– 522	– 691
Income tax expenses/income	– 23,000	– 16,229	– 9,485	– 7,747
Annual net income	30,968	25,256	21,189	18,624
Other comprehensive income	9,693	– 3,211	91	185
Total comprehensive income for period	**40,661**	**22,045**	**21,280**	**18,809**
Dividends received from material joint ventures	–	–	7,976	7,771

Further key financial figures for material joint ventures

Euro 000s	Grosskraftwerk Mannheim AG, Mannheim – Financial year	Grosskraftwerk Mannheim AG, Mannheim – Previous year	Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt – Financial year	Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt – Previous year
Assets	**2,017,183**	**1,795,709**	**288,493**	**287,230**
Non-current assets	1,427,019	1,540,530	246,480	244,134
Current assets	590,164	255,179	42,013	43,096
of which cash and cash equivalents	264	336	2,321	1,483
Equity and debt	**2,017,183**	**1,795,709**	**288,493**	**287,230**
Equity	176,864	136,203	73,285	68,484
Non-current provisions	733,023	721,605	11,628	11,842
Non-current debt and other liability items	530,425	665,589	76,913	80,457
of which non-current financial debt	480,000	605,000	14,192	16,394
Current provisions	437,204	165,799	1,009	225
Current debt and other liability items	139,667	106,513	125,658	126,222
of which current financial debt	69,870	69,870	50,350	91,596

Reconciliation of summarised key financial figures with carrying amounts of material joint ventures

Euro 000s	Grosskraftwerk Mannheim AG, Mannheim – Financial year	Grosskraftwerk Mannheim AG, Mannheim – Previous year	Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt – Financial year	Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt – Previous year
Net assets at 1 October	136,203	114,158	68,484	65,731
Profit/loss for period	30,968	25,256	21,189	18,624
Distribution	–	–	– 16,479	– 16,056
Other comprehensive income	9,693	– 3,211	91	185
Net assets at 30 September	**176,864**	**136,203**	**73,285**	**68,484**
Group share of net assets	49,522	38,137	35,470	33,146
Other items	1,897	1,897	– 392	– 154
Goodwill			53,759	53,759
Carrying amount of interest in joint ventures	**51,419**	**40,034**	**88,837**	**86,751**

Other comprehensive income at material joint ventures includes items resulting from the measurement of pension obligations.

The consolidated joint venture Grosskraftwerk Mannheim AG has a financial year ending on 31 December, and thus deviating from MVV's financial year. Its results have been recognised at the Group accordingly. As this company involves a power plant whose costs are fully reimbursed and whose annual net income and distributions remain constant, the deviating balance sheet date does not have any implications for MVV. As in the previous year, no publicly listed market price is available.

The aggregate profit/loss, total comprehensive income and carrying amounts of non-material joint ventures are presented in the following table:

Summarised key financial figures for non-material joint ventures

Euro 000s	**Financial year**	Previous year
Profit/loss for period	2,671	9,501
Other comprehensive income	1,608	885
Total comprehensive income for period	4,279	10,386
Carrying amount of interest in non-material joint ventures	**39,339**	**59,857**

19. Associates

The aggregate profit/loss, total comprehensive income and carrying amounts of non-material associates are presented in the following table:

Summarised key financial figures for non-material associates

Euro 000s	**Financial year**	Previous year
Profit/loss for period	3,422	4,112
Total comprehensive income for period	3,422	4,112
Carrying amount of interest in non-material associates	**14,823**	**14,857**

The income from shareholdings collected by MVV from associates amounted to Euro 962 thousand in the 2022 financial year (previous year: Euro 510 thousand).

MVV's share of the contingent liabilities at associates amounted to Euro 1,521 thousand (previous year: Euro 1,606 thousand).

20. Subsidiaries with non-controlling interests of material significance to the Group

Given their size and influence on the Group, the following companies have been identified as material subsidiaries with non-controlling interests: Stadtwerke Kiel AG, Kiel, and Energieversorgung Offenbach AG, Offenbach am Main.

The statements of comprehensive income and further key financial information concerning the non-controlled interests in the companies are presented in the following tables. The figures stated represent amounts prior to consolidation.

Statement of comprehensive income for non-controlled interests in Energieversorgung Offenbach AG

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021
Sales excluding energy taxes	521,402	381,082
Annual net income	271,641	85,292
Other comprehensive income	79,173	38,111
Total comprehensive income for period	**350,814**	**123,403**
Total comprehensive income attributable to non-controlling interests	175,403	61,700
Dividends paid (to non-controlling shareholders)	8,963	8,605

Further key financial figures for non-controlled interests in Energieversorgung Offenbach AG

Euro 000s	**30 Sep 2022**	30 Sep 2021
Assets	**1,179,403**	**575,465**
Non-current assets	563,984	410,778
Current assets	615,419	164,687
of which cash and cash equivalents	110,663	8,851
Equity and debt	**1,179,403**	**575,465**
Equity	578,135	245,249
Non-current provisions	22,026	30,432
Non-current debt and other liability items	264,206	177,243
of which non-current financial debt	124,366	128,467
Current provisions	9,097	5,876
Current debt and other liability items	305,939	116,665
of which current financial debt	10,974	15,741

Statement of comprehensive income for non-controlled interests in Stadtwerke Kiel AG

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021
Sales excluding energy taxes	1,521,710	993,666
Annual net income	324,874	218,784
Other comprehensive income	9,387	907
Total comprehensive income for period	**334,261**	**219,691**
Total comprehensive income attributable to non-controlling interests	163,788	107,649
Dividends paid (to non-controlling shareholders)	11,553	7,142

Further key financial figures for non-controlled interests in Stadtwerke Kiel AG

Euro 000s	**30 Sep 2022**	30 Sep 2021
Assets	**2,318,507**	**1,276,894**
Non-current assets	1,145,131	772,273
Current assets	1,173,376	504,621
of which cash and cash equivalents	320,014	181,697
Equity and debt	**2,318,507**	**1,276,894**
Equity	739,906	429,222
Non-current provisions	25,291	32,979
Non-current debt and other liability items	583,646	344,498
of which non-current financial debt	230,341	257,187
Current provisions	17,434	25,982
Current debt and other liability items	952,230	444,213
of which current financial debt	32,437	36,351

Total non-controlled interests in subsidiaries amounted to Euro 728,278 thousand in the period under report, of which Euro 355,249 thousand related to Stadtwerke Kiel AG, Kiel, Euro 269,740 thousand to Energieversorgung Offenbach AG, Offenbach am Main, and Euro 101,977 thousand to non-material subsidiaries.

21. Other financial assets

Write-downs and the development in other financial assets are presented in the line items "Income from companies recognised at equity and other income from shareholdings" (Note **8**) and "Financial instruments" (Note **36**).

Other financial assets comprise other majority shareholdings, other shareholdings, receivables from finance leases and loans. These items are measured and categorised as follow:

Other majority shareholdings are measured at amortised cost. Other shareholdings are measured at fair value. The other shareholdings recognised under other financial assets involve minority shareholdings.

The loans included in this line item are measured at amortised cost. Lease receivables are classified under leases, with finance leases recognised as receivables in the amount of the present value of minimum lease payments (net investment value). Loans and lease receivables have fixed interest rates, with an average interest rate of 5.2 % (previous year: 4.4 %). The average period for which interest rates remain fixed amounts to 2.3 years in the case of fixed-interest loans (previous year: 4.1 years) and 5.4 years in the case of finance leases (previous year: 6.6 years).

Default risks identifiable for financial assets are accounted for by way of adjustments recognised under income from shareholdings or in impairment losses for financial instruments.

Further information about financial instruments can be found in Note **36**.

As in the previous year, there were no restrictions on disposal or other encumbrances.

Other financial assets mainly comprise lease receivables of Euro 43,601 thousand (previous year: Euro 55,882 thousand) and loans of Euro 6,539 thousand (previous year: Euro 6,284 thousand).

Other financial assets also include the non-current share of finance leases. In several contracting projects and housing concepts for data centres, MVV acts as the lessor in the context of financial lease arrangements. The reconciliation of the minimum lease payments with net investments in leases is as follows:

Reconciliation of net investments in leases

Euro 000s	**30 Sep 2022**	30 Sep 2021
Minimum lease payments with maturities < 1 year	12,105	12,607
Minimum lease payments with maturities > 1 year and < 5 years	37,814	44,079
of which minimum lease payments with maturities > 1 year and < 2 years	10,101	10,930
of which minimum lease payments with maturities > 2 years and < 3 years	10,301	11,152
of which minimum lease payments with maturities > 3 years and < 4 years	10,306	11,143
of which minimum lease payments with maturities > 4 years and < 5 years	7,106	10,854
Minimum lease payments with maturities > 5 years	14,222	25,352
Total minimum lease payments	**64,141**	**82,038**
Less financing income not yet realised	– 11,104	– 16,759
Net investments in finance leases	**53,037**	**65,279**

The reduction in receivables from minimum lease payments and associated interest portions mainly results from the redemption of receivables in connection with the sale of shares in Main DC Offenbach GmbH and Main DC Asset GmbH.

Further disclosures on leases involving finance lease arrangements are summarised in the following table:

Disclosures on leases involving finance leases (as lessor)

Euro 000s	**FY 2022**	FY 2021
Financing income from net investment in lease	3,368	3,900
Profit on sale	151	16

22. Other receivables and assets

Other receivables and assets have been broken down into their respective contents and counterparties in the following tables. The hedging relationship has also been stated in the case of derivative financial instruments.

Financial and non-financial receivables and assets

	30 September 2022			30 September 2021		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Financial receivables and assets						
Derivative financial instruments	3,764,544	13,662,345	17,426,889	1,240,355	7,757,340	8,997,695
Receivables from security deposits for energy trading transactions	–	36,235	36,235	–	–	–
Receivables from finance leases	–	9,435	9,435	–	9,397	9,397
Suppliers with debit balances	–	7,580	7,580	–	11,619	11,619
Loans	–	1,973	1,973	–	2,220	2,220
Receivables from employees	–	241	241	–	252	252
Escrow accounts	–	35	35	–	35	35
Miscellaneous other financial assets	5,134	7,070	12,204	8,612	16,203	24,815
Non-financial receivables and assets						
Project development contract assets	–	22,695	22,695	–	47,992	47,992
Other contract assets	2,940	12,882	15,822	3,289	43,106	46,395
Other tax receivables	–	113,419	113,419	–	63,563	63,563
Deferred expenses and accrued income	4,999	29,319	34,318	3,995	7,873	11,868
Emission rights	–	1,335	1,335	–	2,632	2,632
Miscellaneous other non-financial assets	3,050	3,790	6,840	3,411	3,313	6,724
	3,780,667	**13,908,354**	**17,689,021**	**1,259,662**	**7,965,545**	**9,225,207**

Derivative financial instruments (financial receivables and assets)

	30 September 2022			30 September 2021		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	3,764,544	13,662,345	17,426,889	1,240,355	7,757,340	8,997,695
of which not involving IFRS 9 hedges	2,071,343	10,243,546	12,314,889	762,334	6,204,528	6,966,862
of which involving IFRS 9 hedges	1,693,201	3,418,799	5,112,000	478,021	1,552,812	2,030,833

Derivative financial instruments increased sharply in value compared with the previous year. This was due in particular to the significant changes in market prices and resultant rise in fair values of energy trading transactions recognised under IFRS 9. Derivative financial instruments relate to interest, currency and commodity derivatives for electricity, gas, coal, CO_2 and other certificates.

Further information about financial instruments can be found in Note **36**.

The current portion of lease receivables is reported under current miscellaneous other financial assets. Measurement of these items is based on the same principles as for the non-current portions. These principles are outlined under other financial assets.

Due to the settlement of projects, project development contract assets showed a significant reduction of Euro 25,297 thousand. Other contract assets decreased by Euro 30,573 thousand. This reduction was chiefly due to the completion of an investment project in which a subsidiary is acting as general contractor.

Other tax receivables mainly include input tax and energy tax credits.

The increase in deferred expenses and accrued income mainly relates to an advance payment made to Grosskraftwerk Mannheim for its coal stocking measures.

Miscellaneous other non-financial assets include expenses of Euro 6,054 thousand for the past extension and renewal of infrastructure assets for British generation positions. These assets are not within MVV's control but are essential for the supply of electricity and steam. The outlays thereby incurred are being deferred over the corresponding contractual terms. Furthermore, this item also includes input taxes that are not yet deductible.

The costs of acquiring contracts (customer acquisition costs) form part of the miscellaneous other financial assets line item, which are capitalised pursuant to IFRS 15. Costs relating to contract terms of less than one year are directly expensed.

These costs are amortised over the average contractual term and developed as follows:

Customer acquisition costs pursuant to IFRS 15

Euro 000s	**FY 2022**	FY 2021
Balance at 1 October	626	627
Balance at 30 September	708	626

Other receivables and assets

	30 September 2022			30 September 2021		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Other receivables and assets						
from third parties	3,779,050	13,852,427	17,631,477	1,259,230	7,930,424	9,189,654
from other majority shareholdings	–	1,317	1,317	–	1,139	1,139
from companies recognised at equity	1,617	54,610	56,227	432	33,982	34,414
	3,780,667	**13,908,354**	**17,689,021**	**1,259,662**	**7,965,545**	**9,225,207**

The write-downs and maturity structures for other receivables and assets have been presented in Note **36.**

To reduce the counterparty risk involved in highly fluctuating fair values of energy trading derivatives, security deposits are exchanged with external trading partners. These involve margins. To reduce these counterparty risks, payments are generally made to energy exchanges such as the European Energy Exchange (EEX) or the Intercontinental Exchange (ICE). These are included in the receivables from security deposits for energy trading transactions line item. Due to the charging on of margins to a joint venture, receivables from security deposits rose year-on-year to Euro 36,235 thousand (previous year: Euro 0 thousand).

The opening and closing balances of contract assets recognised under IFRS 15 are presented in the following table:

Contract assets

Euro 000s	**FY 2022**	FY 2021
Balance at 1 October	94,387	58,528
Balance at 30 September	38,517	94,387

23. Inventories

Inventories

Euro 000s	**30 Sep 2022**	30 Sep 2021
Raw materials and supplies	121,761	90,441
Finished and unfinished products and services (project rights)	94,816	55,321
Finished and unfinished products and services (other) and merchandise	56,451	50,797
Advance payments	39,703	5,654
Gas holdings	39,424	8,667
	352,155	**210,880**

Write-downs of Euro 1,195 thousand were recognised for inventories (previous year: Euro 5,368 thousand). Write-ups of Euro 2,015 thousand were included due to higher net disposal prices (previous year: Euro 3,464 thousand).

Gas holdings consist of gas stored in caverns. The significant increase in this line item is due to the rise in gas procurement prices.

24. Trade receivables

Trade receivables

Euro 000s	**30 Sep 2022**	30 Sep 2021
Trade receivables	554,103	376,015
of which due from other majority shareholdings	16	122
of which due from companies recognised at equity	12,486	10,698
of which due from other shareholdings	694	876

The above table exclusively shows those trade receivables with terms of under one year. Trade receivables with terms of more than one year are of immaterial significance at the Group and have been recognised under other receivables and assets.

Trade receivables arise in connection with contracts with customers.

The write-downs and maturity structures for trade receivables have been presented in Note **36.**

25. Income tax receivables

The income tax receivables of Euro 58,236 thousand (previous year: Euro 30,136 thousand) mainly relate to corporate income tax and trade tax refund claims. These have been recognised at nominal value.

26. Cash and cash equivalents

Cash and cash equivalents predominantly comprise credit balances at banks. The inflows of security deposits for counterparty default risk (margins) in the year under report increased cash and cash equivalents by Euro 895 million (previous year: inflow of Euro 843 million). The acquisition of fully consolidated companies and other business units resulted in the addition of cash and cash equivalents of Euro 2,049 thousand (previous year: Euro 8,771 thousand). The disposal of fully consolidated companies and other business units led to the retirement of cash and cash equivalents of Euro 2,530 thousand (previous year: Euro 1,508 thousand).

Within the framework of short-term liquidity management structures, credit balances are exclusively deposited at banks of impeccable creditworthiness.

27. Assets held for sale

A piece of land owned by MVV Enamic GmbH was classified as held for sale. The land was acquired with the intention of building a data centre. A tender for an anchor customer was not obtained, as a result of which the land is to be resold. The sale has been contractually agreed and all conditions precedent are expected to be satisfied by the end of the 2022 calendar year.

28. Equity

The structure and development of equity are presented in the statement of changes in equity.

Share capital: The share capital of MVV Energie AG amounts to Euro 168,721 thousand and is divided into 65,906,796 individual registered shares with an arithmetic value of Euro 2.56 each. All registered shares are paid up in full. The City of Mannheim directly and indirectly owned 50.10 % of the shares at 30 September 2022, while FS DE Energy GmbH held 45.08 % of the shares. The remaining 4.82 % of the shares are in free float.

Authorised Capital II: By resolution dated 8 March 2019, the Annual General Meeting of MVV Energie AG authorised the Executive Board until 7 March 2024 to increase the share capital on one or several occasions by a total of up to Euro 51,200 thousand. Shareholders must generally be granted subscription rights; however, the Executive Board may exclude such rights on one or several occasions, in full or in part, for a maximum total of up to 9,880,000 new individual registered shares. The Executive Board of MVV Energie AG has not yet made any use of this authorisation.

Authorisation to buy back treasury stock: By resolution dated 13 March 2020, the Annual General Meeting authorised the Executive Board until 12 March 2025 to acquire treasury stock up to 10 % of the share capital existing at the time at which the Annual General Meeting adopted the resolution or, if lower, at the time at which the authorisation is exercised. The Executive Board of MVV Energie AG has not yet made any use of this authorisation.

Capital reserve: This relates to MVV Energie AG and includes external flows of funds requiring inclusion pursuant to § 272 HGB. The variance of Euro 3,705 thousand to the capital reserve presented in the financial statements of MVV Energie AG is due to transaction costs for the capital increases executed in 2006 and 2007, which have been recognised as a reduction to the capital reserve.

Equity generated: In addition to the prorated revenue reserves and accumulated annual net income of MVV Energie AG and of other consolidated companies since the date of initial consolidation, equity generated also includes cumulative changes recognised directly in equity as a result of the fair value measurement of financial instruments, mainly relating to hedge relationships recognised under IFRS 9, as well as currency translation differences arising upon the translation of foreign financial statements and actuarial gains and losses for defined benefit pension plans. Income of Euro 676,473 thousand was recognised directly in equity in the financial year under report in connection with the fair value measurement of financial instruments (previous year: expenses of Euro 70,783 thousand).

29. Provisions

Provisions

Euro 000s	Balance at 1 Oct 2021	Change in scope of consoli-dation	Currency adjust-ments	Utilised	Reversed	Added	Changes within equity	Reclassi-fied	Interest compo-nent	**Balance at 30 Sep 2022**
Non-current provisions										
Pensions and similar obligations	**96,044**	**–**	**1**	**– 3,233**		**3,665**	**– 35,427**	**13,249**	**1,082**	**75,381**
Personnel-related obligations	36,289	–	5	– 13,940	– 380	1,070	–	– 13,684	– 387	8,973
Refurbishment, dismantling and warranty obligations	50,490	–	– 98	– 2	– 1,000	994	– 6,561	– 2,337	– 1,245	40,241
Provisions for litigation and contract risks	1,589	–	–	– 224	– 275	1,979	–	– 36	–	3,033
Miscellaneous contingencies	18,165	–	–	– 299	– 707	767	–	2,248	– 98	20,076
Total other provisions	**106,533**	**–**	**– 93**	**– 14,465**	**– 2,362**	**4,810**	**– 6,561**	**– 13,809**	**– 1,730**	**72,323**
Total non-current provisions	**202,577**	**–**	**– 92**	**– 17,698**	**– 2,362**	**8,475**	**– 41,988**	**– 560**	**– 648**	**147,704**
										–
Current provisions										–
Tax provisions	**1,795**	**934**	**–**	**– 1,869**	**– 200**	**394**	**–**	**–**	**–**	**1,054**
Other provisions										–
Personnel-related obligations	44,263	– 46	341	– 38,260	– 2,227	39,936	–	439	–	44,446
Services not yet invoiced	80,713	–	36	– 77,910	– 503	93,297	–	–	–	95,633
Refurbishment, dismantling and warranty obligations	8,750	– 21	75	– 2,095	– 662	588	–	2,337	–	8,972
Provisions for litigation and contract risks	3,943	–	50	– 1,376	– 1,139	6,819	–	36	–	8,333
Miscellaneous contingencies	36,620	13	50	– 21,474	– 2,675	35,249	–	– 2,252	–	45,531
Total other provisions	**174,289**	**– 54**	**552**	**– 141,115**	**– 7,206**	**175,889**	**–**	**560**	**–**	**202,915**
Total current provisions	**176,084**	**880**	**552**	**– 142,984**	**– 7,406**	**176,283**	**–**	**560**	**–**	**203,969**
										–
Total provisions	**378,661**	**880**	**460**	**– 160,682**	**– 9,768**	**184,758**	**– 41,988**	**–**	**– 648**	**351,673**

Reclassifications mainly involve reclassifications of compensation payments of Euro 13,249 thousand.

Provisions broken down by maturity

	30 September 2022			30 September 2021		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Provisions for pensions and similar obligations	75,381	–	75,381	96,044	–	96,044
Tax provisions	–	1,054	1,054	–	1,795	1,795
Personnel-related obligations	8,973	44,446	53,419	36,289	44,263	80,552
Services not yet invoiced	–	95,633	95,633	–	80,713	80,713
Refurbishment, dismantling and warranty obligations	40,241	8,972	49,213	50,490	8,750	59,240
Provisions for litigation and contract risks	3,033	8,333	11,366	1,589	3,943	5,532
Miscellaneous contingencies	20,076	45,531	65,607	18,165	36,620	54,785
	147,704	**203,969**	**351,673**	**202,577**	**176,084**	**378,661**

Tax provisions include other tax provisions for value added taxes as of the reporting date.

Provisions are only recognised for uncertain income tax items if the fiscal authorities are unlikely to recognise the respective item.

The provisions for personnel-related obligations category comprises provisions for early retirement expenses and for employee benefit expenses.

The provisions for early retirement expenses mainly relate to legal and constructive obligations towards employees as a result of part-time early retirement agreements. The actuarial assumptions correspond to those used to measure pensions and similar obligations.

The personnel-related obligations mainly include collectively agreed obligations, such as allowances, bonus payments, employee working hour credits and anniversary bonuses. The provisions for employee benefit expenses include individual items for which utilisation depends on a specified degree of target achievement. The obligations for compensation payments were reclassified to pensions in the current financial year.

The services not yet invoiced category principally relates to the provision and invoicing of CO_2 costs to an at-equity company. These items have been measured on the basis of appropriate estimates.

The provisions for refurbishment, dismantling and warranty obligations category mainly includes dismantling obligations in connection with the construction of a gas storage facility and for wind turbines.

The provisions for warranties relate to solar and wind power projects already completed. These provisions have been recognised on the basis of contractual requirements. Recognition has been based on assessments of individual cases and relevant factors.

The provisions for litigation and contract risks category includes provisions for the litigation risks relating to several individual risks for which the level of utilisation is uncertain. The value is based on the most likely outcome of litigation expected on the basis of the information currently available. Furthermore, this category also includes provisions for onerous contracts.

Miscellaneous contingencies mainly include provisions for risks relating to contractual obligations for completed projects and for the renewal of infrastructure assets.

The provisions recognised are utilised in accordance with the terms to which they are allocated. Depending on their term, non-current provisions are discounted with discount rates of between 1.0 % and 3.8 %.

30. Provisions for pension and similar obligations

The company pension plans consist of defined contribution and defined benefit plans.

The pension scheme for MVV employees is largely arranged in line with collective wage and salary agreements specific to the respective companies. This results in indirect pension obligations to employees which are covered almost exclusively by municipal supplementary pension companies (ZVKs). This requires allocations to be made for retirement periods. The payments made in this context serve to finance current pension outlays. According to IFRS requirements, this type of pension plan represents a defined benefit plan, as the individual benefits provided by the ZVKs to former employees of member companies are not dependent on the level of contributions paid into the pension funds. Moreover, as the employees of several member companies are insured by the ZVKs, this type of pension plan is considered a multi-employer plan and thus requires the application of special regulations.

Given the redistribution of the benefits provided by ZVKs among member companies and the lack of adequate information about the age structures, personnel turnover rate and salaries of the employees hereby covered, no data is available on the proportion of future payment obligations (economic obligation) accruing to MVV. In view of this, IFRS does not permit recognition of provisions and the amounts therefore have to be treated by MVV as a defined contribution obligation, even though it is actually a defined benefit pension plan. Contributions to the pension plan are measured as a percentage of remuneration subject to the additional pension premium and are borne by employees and employers. The percentage rate of contribution is determined by the ZVKs. MVV expects contributions in the 2023 financial year in the same amount as in the previous year. The contributions are used for the beneficiaries as a collective entity. Should the ZVKs have insufficient funds, then they could increase the mandatory contribution. Should MVV terminate its membership of the ZVKs, then they would be entitled to financial settlement. The amount of settlement is calculated as the present value of beneficiaries' existing entitlement and future claims on the part of their surviving dependants and existing pension entitlements for vested claims at the time at which membership is terminated.

The payments made to municipal supplementary pension companies (ZVKs) and the state pension system are viewed as payments to defined contribution plans. These contributions are recognised as expenses and reported under employee benefit expenses. Payments of Euro 37,560 thousand were made to state pension systems in the 2022 financial year (previous year: Euro 33,734 thousand). Moreover, an amount of Euro 16,177 thousand was paid into defined contribution pension schemes (previous year: Euro 16,195 thousand).

Furthermore, there are direct pension obligations resulting from former collective agreements (measured in terms of duration of company service and employee compensation), as well as individual commitments made to Executive Board members.

Provisions for pensions and similar obligations are recognised exclusively for defined benefit plans.

The principal estimates used when measuring provisions for pensions and similar obligations particularly include the discount factor, biometric probabilities and trend assumptions. Any deviations in the development in these estimates could result in differences between the amounts recognised and the obligations actually arising over time.

Actuarial gains and losses are fully recognised in the period in which they arise. They are recognised outside the income statement in the statement of income and expenses recognised in group equity.

Pursuant to IAS 19, the pension provisions are calculated using the projected unit credit method. As well as pensions and vested claims known of at the balance sheet date, this method also accounts for pay rises and pension increases expected in future. The calculation made application of the 2018 G Heubeck mortality tables. The main parameters used to calculate the defined benefit plans as of 30 September 2022 are:

Parameters

	FY 2022	FY 2021
Discount rate	3.8 %	0.9 %
Future pay rises	2.5-3.0 %	2.0-2.5 %
Future pension increases	1.6-3.0 %	1.6-3.0 %

The expenses for these pensions and similar obligations structured as defined benefit plans comprise the following items:

Pension provision expenses

Euro 000s	**FY 2022**	FY 2021
Service cost	4,127	4,192
Interest expenses	1,082	614
	5,209	**4,806**

The interest expenses for vested pension claims are reported in the income statement under financing expenses (compounding of provisions). The other expenses are recognised as employee benefit expenses.

The present value of the defined benefit obligations developed as follows:

Development in pension claims

			30 September 2022			30 September 2021
Euro 000s	**Present value of defined benefit obligations**	**Fair value of plan assets**	**Total**	Present value of defined benefit obligations	Fair value of plan assets	Total
Balance at 1 October	96,870	826	96,044	100,990	732	100,258
Current service cost	4,127	–	4,127	3,775	–	3,775
Retrospective service cost	–	–	–	418	–	418
Interest expenses (interest income)	1,082	–	1,082	614	–	614
Remeasurement						
(i) Income from plan assets (excluding amounts included in interest income from plan assets)	–	8	– 8	–	5	– 5
(ii) Actuarial gains/losses						
of which due to changes in financial assumptions	– 35,955	– 26	– 35,929	– 4,623	67	– 4,690
of which due to changes in demographic assumptions	–	–	–	–	–	–
of which due to changes in experience adjustments	502	–	502	– 1,479	–	– 1,479
Payments made to beneficiaries	– 3,233	–	– 3,233	– 2,825	–	– 2,825
Employer contributions	–	453	– 453	–	22	– 22
Reclassifications	13,249	–	13,249	–	–	–
Balance at 30 September	**76,642**	**1,261**	**75,381**	**96,870**	**826**	**96,044**

The defined benefit pension obligations at the Group are countered by a low volume of plan assets. The amount of provision recognised in the balance sheet is calculated as follows:

Calculation of provisions

Euro 000s	FY 2022	FY 2021
Present value of defined benefit obligation	76,642	96,870
Fair value of plan assets	1,261	826
Provisions recognised at 30 September	**75,381**	**96,044**

The plan assets mainly involve contractual trust arrangements (CTAs) managed as trust assets by the trustee Deutsche Pensflex Treuhand e. V. Furthermore, there are insurance contracts with private insurers and an investment fund organised by an international fund company and listed on the capital market.

The actuarial gains and losses recognised in group equity for defined benefit obligations developed as follows:

Accumulated actuarial gains and losses recognised in equity

Euro 000s	FY 2022	FY 2021
Accumulated actuarial gains (+) and losses (-) recognised in equity at 1 October	– 20,720	– 24,323
Actuarial gains (+) and losses (-) recognised in equity	22,074	3,603
Accumulated actuarial gains (+) and losses (-) recognised in equity at 30 September	**1,354**	**– 20,720**

Experience adjustments to the present value of the pension claims (changes in assumptions) form part of the actuarial gains and losses attributable to the pension claims in the given year.

Pension payments of Euro 5,313 thousand are forecast for existing pension obligations in the 2023 financial year.

In the financial year, use was made of a discount rate appropriate to the expected weighted remaining term of 14 years.

The expected maturity of undiscounted pension payments as of the balance sheet date was as follows:

Expected pension payments

Euro 000s	
2023	5,313
2024	3,885
2025	6,565
2026	10,676
2027	3,949
>2027	79,481
	109,869

The sensitivity analysis is based on changes in one assumption while all other assumptions remain constant. That is unlikely to occur in reality. Furthermore, it is possible that changes in several assumptions will correlate with each other. The sensitivity of the defined benefit obligation to actuarial assumptions has been calculated using the same method used to calculate pension provisions in the balance sheet.

The methods and types of assumption used when preparing the sensitivity analysis have not changed compared with the previous year.

Sensitivity analysis

			Impact on obligation
	Change in assumption by	Increase in assumption	Reduction in assumption
Discount rate	0.5	Reduction by 6 %	Increase by 7 %
Future pay rises	0.5	No change	No change
Future pension increases	0.5	Increase by 2 %	Reduction by 2 %
Mortality	1 year	Increase by 3 %	–

31. Financial debt

Financial debt

	30 September 2022			30 September 2021		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liabilities						
to banks	1,581,379	162,744	1,744,123	1,456,974	254,062	1,711,036
in connection with leases	125,463	14,748	140,211	132,971	15,630	148,601
to other majority shareholdings	–	719	719	–	697	697
to companies recognised at equity	–	1,301	1,301	–	1,581	1,581
to other shareholdings	–	900	900	–	1,500	1,500
Other financial debt	26,267	3,414	29,681	19,225	3,636	22,861
	1,733,109	**183,826**	**1,916,935**	**1,609,170**	**277,106**	**1,886,276**

Maturity in years

	30 September 2022			30 September 2021		
Euro 000s	**< 1 year**	**1 - 5 years**	**> 5 years**	< 1 year	1 - 5 years	> 5 years
Liabilities						
to banks	162,744	703,137	878,242	254,062	669,969	787,005
in connection with leases	14,748	44,209	81,254	15,630	46,053	86,918
to other majority shareholdings, companies recognised at equity and other shareholdings	2,920	–	–	3,778	–	–
Other financial debt	3,414	14,524	11,743	3,636	8,001	11,224
	183,826	**761,870**	**971,239**	**277,106**	**724,023**	**885,147**

The fixed-rate liabilities to banks of Euro 1,290,250 thousand (previous year: Euro 1,184,151 thousand) have an average interest rate of 1.5 % (previous year: 1.8 %), while the floating-rate liabilities to banks of Euro 453,874 thousand (previous year: Euro 526,884 thousand) have an average interest rate of 2.4 % (previous year: 1.5 %). The average remaining period for which the interest rate remains fixed in the case of fixed-rate liabilities amounts to nine years (previous year: nine years). The floating-rate liabilities to banks are hedged.

At 30 September 2022, MVV had undrawn committed credit lines of Euro 1,417,087 thousand (previous year: Euro 1,194,929 thousand).

Lease liabilities have been recognised at the present value of mandatory lease payments over the term of the lease. These refer to the right-of-use assets presented in Note **16** "Leases as lessee".

32. Other liabilities

Other liabilities have been broken down into their respective contents and counterparties and presented in the tables below. The hedge relationship has also been stated for derivative financial instruments. After initial recognition, liabilities other than derivative financial instruments are measured at amortised cost using the effective interest method.

Other financial and non-financial liabilities

Euro 000s			**30 September 2022**			30 September 2021
	Non-current	**Current**	**Total**	Non-current	Current	Total
Other financial liabilities						
Derivative financial instruments	3,428,029	13,177,746	16,605,775	1,124,653	7,732,791	8,857,444
Liabilities to employees	–	32,500	32,500	–	32,476	32,476
Customer credit balances	–	18,028	18,028	–	6,189	6,189
Interest liabilities	–	7,734	7,734	–	6,596	6,596
Liabilities for security deposits for energy trading transactions	–	1,453,276	1,453,276	–	821,734	821,734
Concession duties	–	2,938	2,938	–	3,443	3,443
Social security liabilities	–	1,086	1,086	–	799	799
Miscellaneous other financial liabilities	19,379	25,642	45,021	28,459	13,030	41,489
Other non-financial liabilities						
Contract liabilities for advance payments received	1,049	95,847	96,896	–	77,326	77,326
Contract liabilities for building cost grants	125,320	8,377	133,697	115,556	8,172	123,728
Other contract liabilities	10,573	14,529	25,102	11,569	28,630	40,199
Liabilities in connection with German Fuel Emissions Trading Act (BEHG)	502	23,348	23,850	707	16,861	17,568
Liabilities for other taxes	–	86,409	86,409	–	55,918	55,918
Miscellaneous other non-financial liabilities	5,637	1,908	7,545	5,993	1,451	7,444
	3,590,489	**14,949,368**	**18,539,857**	**1,286,937**	**8,805,416**	**10,092,353**

Other liabilities

Euro 000s			**30 September 2022**			30 September 2021
	Non-current	**Current**	**Total**	Non-current	Current	Total
Liabilities	3,590,489	14,853,521	18,444,010	1,286,937	8,732,717	10,019,654
of which to companies recognised at equity	2,490	5,951	8,441	1,187	44,430	45,617
Advance payments received for orders	–	95,847	95,847	–	72,699	72,699
	3,590,489	**14,949,368**	**18,539,857**	**1,286,937**	**8,805,416**	**10,092,353**

The value of derivatives financial instruments rose sharply compared with the previous year, with this being due in particular to the significant changes in market prices and resultant rise in the fair values of energy trading transactions recognised under IFRS 9. Derivative financial instruments involve interest rate derivatives, currency derivatives and commodity derivatives for electricity, gas, coal, CO_2 and other rights.

Further details about financial instruments can be found in Note **36**.

Derivative financial instruments (other financial liabilities)

Euro 000s	30 September 2022 Non-current	Current	Total	30 September 2021 Non-current	Current	Total
Derivative financial instruments	3,428,029	13,177,746	16,605,775	1,124,653	7,732,791	8,857,444
of which not involving IFRS 9 hedges	2,200,297	10,210,293	12,410,590	743,090	5,962,443	6,705,533
of which involving IFRS 9 hedges	1,227,732	2,967,453	4,195,185	381,563	1,770,348	2,151,911

To reduce the counterparty risk involved in highly fluctuating fair values of energy trading derivatives, security deposits (margins) are exchanged on the energy exchanges, such as EEX or ICE. Liabilities of Euro 1,453,276 thousand were recognised for security deposits for energy trading transactions as of the balance sheet date on 30 September 2022 (previous year: Euro 821,734 thousand).

Miscellaneous other financial liabilities mainly relate to liabilities for earn-out obligations and deferred liabilities.

As of 30 September 2022, non-financial liabilities for other taxes chiefly include value added and energy tax liabilities.

The recognition of liabilities in connection with the German Fuel Emissions Trading Act (BEHG) was introduced upon the entry into force of this legislation as of 1 January 2021.

The opening and closing balances of contract liabilities recognised under IFRS 15 are presented in the following table:

Contract liabilities

Euro 000s	FY 2022	FY 2021
Balance at 1 October	241,253	211,050
Balance at 30 September	**255,694**	**241,253**

Other contract liabilities showed a year-on-year decrease as of 30 September 2022. This chiefly resulted from the virtual completion of projects in the field of planning and building photovoltaics system.

MVV expects that, of the transaction price allocated to unsatisfied performance obligations as of 30 September 2022, an amount of Euro 118,752 thousand (previous year: Euro 114,128 thousand) will be recognised as revenues in the next reporting period. The remaining amount of Euro 136,942 thousand (previous year: Euro 127,125 thousand) will be recognised in subsequent financial years.

33. Trade payables

Trade payables

Euro 000s	**30 Sep 2022**	30 Sep 2021
Trade payables	507,216	383,286
to other majority shareholdings	263	153
to companies recognised at equity	7,644	14,905
to other shareholdings	242	–

Trade payables are measured at amortised cost. The above table exclusively shows trade payables with terms of under one year. Due to their immaterial significance for the Group, trade payables maturing in the medium to long term have been recognised under other liabilities.

34. Income tax liabilities and deferred taxes

This line item includes income tax liabilities of Euro 39,384 thousand (previous year: Euro 36,011 thousand).

The deferred taxes reported for the 2022 financial year relate to the following items:

Deferred taxes

	30 September 2022		30 September 2021	
Euro 000s	**Deferred tax assets**	**Deferred tax liabilities**	Deferred tax assets	Deferred tax liabilities
Intangible assets	8,690	– 10,734	2,799	– 12,400
Property, plant and equipment	27,940	– 196,328	20,727	– 179,475
Right-of-use assets	–	– 42,641	–	– 41,386
Inventories	19,530	– 8,105	9,255	– 4,688
Special item	–	– 1,542	–	– 12,516
Other assets and positive fair values of derivatives	25,376	– 6,625,713	15,466	– 3,178,280
Provisions for pensions	7,016	–	17,158	–
Non-current other provisions	15,306	–	22,545	–
Current other provisions	11,417	– 24,193	9,996	– 24,566
Liabilities and negative fair values of derivatives	6,809,562	– 508,160	3,125,029	– 25,885
Lease liabilities	44,640	–	39,580	–
Losses carried forward	36,015	–	46,063	–
Deferred taxes (gross)	7,005,492	– 7,417,416	3,308,618	– 3,479,196
Netting	– 6,890,273	6,890,273	– 3,204,749	3,204,749
Deferred taxes (net)	**115,219**	**– 527,143**	**103,869**	**– 274,447**

Of the (net) deferred taxes presented above, Euro 26,741 thousand (previous year: Euro 18,806 thousand) relate to non-current deferred tax assets and Euro 133,194 thousand (previous year: Euro 60,408 thousand) to non-current deferred tax liabilities.

No deferred tax assets have been recognised for corporate income tax loss carryovers of Euro 62,131 thousand (previous year: Euro 71,504 thousand), trade tax loss carryovers of Euro 42,845 thousand (previous year: Euro 52,359 thousand) or foreign loss carryovers of Euro 186,152 thousand (previous year: Euro 114,369 thousand).

For temporary differences of Euro 10,505 thousand at shareholdings (previous year: Euro 10,220 thousand), no deferred tax liabilities have been stated for an amount of Euro 3,183 thousand (previous year: Euro 3,097 thousand), as such differences are unlikely to be reversed by dividend distribution or disposal of the companies in the foreseeable future.

Deferred tax assets of Euro 2,965 thousand (previous year: Euro 5,667 thousand) have been recognised at the balance sheet date for companies that generated a loss in the financial year under report or the previous year in cases where the realisation of the assets is exclusively dependent on the generation of future profits. Such realisation is chiefly attributable to restructuring measures. Any surplus of deferred tax assets from temporary differences is only recognised when it is recoverable.

Deferred taxes of Euro 272,173 thousand (debit balance) were recognised directly in other comprehensive income as part of group equity in the 2022 financial year (previous year: credit balance of Euro 44,851 thousand).

The income tax items within other comprehensive income in group equity can be broken down into their components as follows:

Income tax items

	30 September 2022		30 September 2021	
Euro 000s	**Income tax**	**Gross**	Income tax	Gross
Actuarial gains and losses	– 8,513	35,426	– 2,102	7,852
Share of total comprehensive income attributable to companies recognised at equity	–	3,634	–	– 360
Items that will not be reclassified to profit or loss	**– 8,513**	**39,060**	**– 2,102**	**7,492**
Cash flow hedges/hedging costs	– 311,511	1,057,407	21,968	– 66,560
Currency translation differences	–	– 2,476	–	12,022
Share of total comprehensive income attributable to companies recognised at equity	–	– 898	–	– 369
Items that will be reclassified to profit or loss	**– 311,511**	**1,054,033**	**21,968**	**– 54,907**

35. Contingent claims, liabilities and financial obligations

The volume of obligations for contingent liabilities, claims and financial obligations stated below corresponds to the scope of liability at the balance sheet date. Contingent claims are treated by analogy with contingent liabilities.

Contingent liabilities involve potential obligations to third parties or existing obligations for which an outflow of resources is unlikely or whose amount cannot be reliably determined. Contingent liabilities are not recognised in the balance sheet.

The company has contingent liabilities of Euro 7.4 million for warranty agreements (previous year: Euro 7.0 million). It has obligations of this nature in the form of guarantees amounting to Euro 9.5 million (previous year: Euro 9.2 million). As in the previous year, no collateral has been provided for third-party liabilities.

MVV has purchase commitments of Euro 132.4 million in connection with investment orders placed and financial obligations (previous year: Euro 116.1 million).

The Group has a contingent claim from the State of Baden-Württemberg and the City of Mannheim in connection with a land decontamination measure. This claim has a present value of Euro 2.3 million (previous year: Euro 2.3 million).

36. Financial instruments

Fair values and carrying amounts of financial instruments

The carrying amounts of financial instruments recognised at MVV and their allocation to the IFRS 9 measurement categories have been presented in the following tables. The classes presented are based on the balance sheet.

IFRS 9 measurement categories for carrying amounts

Euro 000s	IFRS 9 measurement categories	30 Sep 2022	30 Sep 2021
Assets			
Financial assets			
of which other shareholdings	Fair value through profit or loss	6,104	5,909
	Not applicable	2,494	2,162
of which loans not involving finance leases	Amortised cost	8,512	8,505
of which loans involving finance leases	Not applicable	53,037	65,279
of which securities	Fair value through profit or loss	204	196
Trade receivables < 1 year	Amortised cost	554,103	376,015
Other assets			
of which derivatives outside hedge accounting	Fair value through profit or loss	12,314,889	6,966,862
of which derivatives within hedge accounting	Not applicable	5,112,000	2,030,833
of which other financial assets	Amortised cost	56,295	36,721
of which contract assets	Not applicable	38,517	94,387
Cash and cash equivalents	Amortised cost	1,884,998	1,258,178
		20,031,153	**10,845,047**
Liabilities			
Financial debt			–
of which financial debt involving leases	Not applicable	140,211	148,601
of which other financial debt	Amortised cost	1,776,724	1,737,675
Trade payables <1 year	Amortised cost	507,216	383,286
Other liabilities			
of which derivatives outside hedge accounting	Fair value through profit or loss	12,410,590	6,705,533
of which derivatives within hedge accounting	Not applicable	4,195,185	2,151,911
of which other financial liabilities	Amortised cost	1,544,201	886,520
	Fair value through profit or loss	16,382	26,206
		20,590,509	**12,039,732**

Given the predominantly short-term remaining terms of trade receivables and payables, other financial assets and liabilities and cash and cash equivalents, their carrying amounts as of the balance sheet date basically correspond to their fair values. Variances relate to loans in connection with finance leases and other financial debt. The carrying amount of loans in connection with finance leases amounts to Euro 53,037 thousand, while the fair value amounts to Euro 60,328 thousand. The carrying amount of other financial debt amounts to Euro 1,776,724 thousand (previous year: Euro 1,737,675 thousand) and the fair value amounts to Euro 1,624,158 thousand (previous year: Euro 1,780,290 thousand).

The fair value of other financial debt items is determined as their present value, taking due account of future payments. These items are discounted using the discount rate valid as of the balance sheet date. Should MVV not have sufficient new information to measure the fair value, then cost is referred to as an approximate estimate of the fair value.

With regard to the fair value measurement of financial instruments, reference is made to the information provided on financial instruments in the accounting policies section of these notes.

The following table presents the key parameters for financial instruments measured at fair value. Pursuant to IFRS 7, the individual levels are defined as follows:

Level 1: Measurement based on prices listed on active markets and taken over without amendment

Level 2: Measurement based on directly or indirectly observable factors other than those in Level 1

Level 3: Measurement based on factors not observable on the market.

Fair value hierarchy at 30 September 2022

Euro 000s	**Level 1**	**Level 2**	**Level 3**
Financial assets			
Other shareholdings	–	–	6,104
Securities	204	–	–
Derivatives outside hedge accounting	9,157,539	3,138,469	18,881
Derivatives within hedge accounting	3,698,897	1,407,413	5,690
Other financial assets	–	–	–
Financial liabilities			
Derivatives outside hedge accounting	9,271,027	3,138,312	1,251
Derivatives within hedge accounting	1,551,195	2,643,517	473
Other financial liabilities	–	–	16,382

Fair value hierarchy at 30 September 2021

Euro 000s	Level 1	Level 2	Level 3
Financial assets			
Other shareholdings	–	–	5,909
Securities	196	–	–
Derivatives outside hedge accounting	3,752,931	3,210,472	3,459
Derivatives within hedge accounting	914,332	1,116,490	11
Other financial assets	–	–	–
Financial liabilities			
Derivatives outside hedge accounting	3,385,777	3,319,238	518
Derivatives within hedge accounting	308,060	1,840,470	3,381
Other financial liabilities	–	–	26,206

No items were reclassified between Levels 1 and 2 of the measurement hierarchy in the year under report. Similarly, no items were reclassified into or out of Level 3.

The other shareholdings in Level 3 do not have market prices listed on any active market. The fair value of other shareholdings is determined in a capital value procedure by discounting future cash flows. Discounting is undertaken by reference to the discount rate valid at the balance sheet date. The input parameters used to measure the fair value are set with due consideration of economic developments and available company data. The fair value thereby determined would increase or decrease depending on the development in future sales and future EBIT.

Derivatives outside hedge accounting in Level 3 involve commodity derivatives and interest derivatives. Where no market prices are available, the fair value is determined using recognised valuation methods based on internal fundamental data. In this, we refer to listings on active markets. Where no active markets are available, reference is made to company-specific assumptions. The positive fair values mainly relate to a power purchase agreement (PPA) involving a long-term electricity supply contract. The fair value of this derivative amounts to Euro 18,750 thousand. Any change in the market price by 10 % upwards or downwards would increase or reduce the fair value by Euro 1,875 thousand respectively.

The derivatives of Euro 5,217 thousand in Level 3 hedge accounting mainly include interest swaps with floor (previous year: Euro 3,381 thousand). The fair value of these derivatives amounts to Euro 5,217 thousand (previous year: Euro 3,381 thousand). Any upward or downward change in the volatility factored into the calculation by an absolute figure of 1 would increase the fair value by Euro 4 thousand (previous year: Euro 36 thousand) or reduce it by Euro 3 thousand (previous year: Euro 35 thousand).

Other Level 3 liabilities include variable purchase price components resulting from acquisitions. The discounted cash flow method is used to determine the fair value. This involves discounting the cash flows expected in future with a predetermined discount rate. The input parameters are set with due consideration of contractual requirements and available company data. The fair value thereby determined would increase or decrease depending on the development in future sales and future EBIT.

The following reconciliation presents the development in financial instruments recognised in Level 3:

Development in financial instruments recognised in Level 3

Euro 000s	Balance at 1 Oct 2021	Gains/losses in income statement	Gains/losses in OCI	Additions/ disposals	Balance at 30 Sep 2022
Financial assets					
Other shareholdings	5,909	–	–	195	6,104
Derivatives outside hedge accounting	3,459	16,758	–	– 1,336	18,881
Derivatives within hedge accounting	11	–	5,679	–	5,690
Financial liabilities					
Derivatives outside hedge accounting	518	1,202	–	– 469	1,251
Derivatives within hedge accounting	3,381	–	– 1,370	– 1,538	473
Other financial liabilities	26,206	– 7,008	–	– 2,816	16,382

Development in financial instruments recognised in Level 3

Euro 000s	Balance at 1 Oct 2020	Gains/losses in income statement	Gains/losses in OCI	Additions/ disposals	Balance at 30 Sep 2021
Financial assets					
Other shareholdings	5,575	– 8	–	342	5,909
Derivatives outside hedge accounting	47	3,412	–	–	3,459
Derivatives within hedge accounting	36	–	11	– 36	11
Other financial assets	–	–	–	–	–
Financial liabilities					
Derivatives outside hedge accounting	733	– 215	–	–	518
Derivatives within hedge accounting	4,424	–	– 1,123	80	3,381
Other financial liabilities	25,395	1,355	–	– 544	26,206

The gains and losses recognised through profit or loss for Level 3 financial instruments are presented in the income statement in the following line items:

Gains and losses recognised in statement of comprehensive income for Level 3 financial instruments

Euro 000s	Total	of which still held at 30 Sep 2022
Other operating income and expenses	15,552	15,786
Financial result	7,012	7,012
Other comprehensive income	7,049	7,037
	29,613	**29,835**

Gains and losses recognised in statement of comprehensive income for Level 3 financial instruments

Euro 000s	Total	of which still held at 30 Sep 2021
Other operating income and expenses	2,165	1,825
Income from shareholdings	– 8	– 8
Financial result	107	107
Other comprehensive income	1,134	1,085
	3,398	**3,009**

Netting of financial assets and financial liabilities

The financial assets and financial liabilities are netted and presented as a net amount in the balance sheet if MVV currently has a legally enforceable right to set-off the recognised amounts and intends either to settle on a net basis or to realise the assets and settle the liability simultaneously.

Furthermore, agreements have been concluded in which the set-off criteria are not met but which permit set-off of the respective amounts in specific circumstances, such as insolvency.

The amounts of financial assets and financial liabilities netted in the balance sheet are presented in the following table. Financial assets and financial liabilities that are subject to a legally enforceable master set-off agreement but which are not netted for accounting purposes are also presented. The related amounts that are not netted in the balance sheet mainly include margin payments received and paid for market transactions and derivative financial instruments not meeting the set-off criteria of IAS 32.

Netting of financial assets at 30 September 2022

	Gross amount of financial assets reported	Gross amount of financial liabilities reported that are netted in balance sheet	Net amount of financial assets reported in balance sheet	Related amounts not netted in balance sheet		Net amount
Euro 000s				Financial instruments	Cash collateral received/granted	
Loans not involving finance leases	8,512	–	8,512	–	–	8,512
Securities	204	–	204	–	–	204
Trade receivables < 1 year	772,438	– 218,335	554,103	–	–	554,103
Derivative financial instruments	17,426,889	–	17,426,889	– 14,466,876	– 2,425,314	534,699
Other financial assets	56,295	–	56,295	–	–	56,295
Cash and cash equivalents	1,884,998	–	1,884,998	–	–	1,884,998
	20,149,336	**– 218,335**	**19,931,001**	**– 14,466,876**	**– 2,425,314**	**3,038,811**

Netting of financial liabilities at 30 September 2022

	Gross amount of financial liabilities reported	Gross amount of financial assets reported that are netted in balance sheet	Net amount of financial liabilities reported in balance sheet	Related amounts not netted in balance sheet		Net amount
Euro 000s				Financial instruments	Cash collateral received/granted	
Other financial debt	1,776,724	–	1,776,724	258,581	1,951	1,516,192
Trade payables < 1 year	695,180	187,964	507,216	–	–	507,216
Derivative financial instruments	16,605,775	–	16,605,775	14,466,876	1,008,220	1,130,679
Other financial liabilities	1,590,954	30,371	1,560,583	–	–	1,560,583
	20,668,633	**218,335**	**20,450,298**	**14,725,457**	**1,010,171**	**4,714,670**

Netting of financial assets at 30 September 2021

Euro 000s	Gross amount of financial assets reported	Gross amount of financial liabilities reported that are netted in balance sheet	Net amount of financial assets reported in balance sheet	Related amounts not netted in balance sheet		Net amount
				Financial instruments	Cash collateral received/granted	
Loans not involving finance leases	8,505	–	8,505	–	–	8,505
Securities	196	–	196	–	–	196
Trade receivables < 1 year	584,130	– 208,115	376,015	–	–	376,015
Derivative financial instruments	8,997,695	–	8,997,695	– 7,653,423	– 1,036,975	307,297
Other financial assets	131,108	–	131,108	–	–	131,108
Cash and cash equivalents	1,258,178	–	1,258,178	– 43,789	–	1,214,389
	10,979,812	**– 208,115**	**10,771,697**	**– 7,697,212**	**– 1,036,975**	**2,037,510**

Netting of financial liabilities at 30 September 2021

Euro 000s	Gross amount of financial liabilities reported	Gross amount of financial assets reported that are netted in balance sheet	Net amount of financial liabilities reported in balance sheet	Related amounts not netted in balance sheet		Net amount
				Financial instruments	Cash collateral received/granted	
Other financial debt	1,737,675	–	1,737,675	43,789	1,023	1,692,863
Trade payables < 1 year	199,737	183,549	383,286	–	–	383,286
Derivative financial instruments	8,857,444	–	8,857,444	7,653,423	215,241	988,780
Other financial liabilities	888,160	24,566	912,726	–	–	912,726
	11,683,016	**208,115**	**11,891,131**	**7,697,212**	**216,264**	**3,977,655**

Net results by measurement category
Financial instruments have been recognised in the income statement with the following net results pursuant to IFRS 7:

Net results (IFRS 7)

Euro 000s	FY 2022	FY 2021
Financial assets and liabilities measured at fair value through profit or loss	124,204	325,628
of which mandatorily measured at fair value	124,204	325,628
Financial assets measured at amortised cost	– 20,409	– 8,465

The presentation of net results takes due account of standalone derivatives included in the "at fair value through profit or loss" measurement category. In the case of financial assets and financial liabilities, the net result in the "at fair value through profit or loss" category is largely attributable to fair value measurement under IFRS 9. The net result from financial liabilities in this category is recognised in the income statement.

For financial assets, the net results in the "at amortised cost" category comprise write-downs.

Total interest income and expenses were recognised in the income statement as follows:

Total interest income and expenses

Euro 000s	FY 2022	FY 2021
Total interest income	8,526	8,681
Total interest expenses	62,941	46,585

The financial result also includes currency translations and the interest components for provisions and lease liabilities not covered by IFRS 7 disclosure requirements, as a result of which the figures published here differ from the financial result. The interest income reported here mainly results from finance leases and loans. The interest expenses mostly relate to loan obligations and interest swaps.

The total interest income and total interest expenses chiefly result from financial assets and liabilities measured at amortised cost, as well as from the reclassification through profit or loss of hedging outcomes for cash flow hedges.

Risk management
Due to its business activities, MVV is exposed to various financial risks. These comprise default, liquidity, interest and exchange rate risks, as well as commodity price risks on both procurement and sales markets. MVV's risk management pursues the objective of identifying developments on financial and commodity markets at an early stage and countering any resultant negative implications. This process is laid down in internal guidelines, discretionary frameworks, responsibilities, separations of functions, checks and processes.

Derivative financial instruments are used to cover against market price risks. For interest rate risks, these mainly involve interest swaps. Currency risks are hedged by concluding forward currency transactions. Commodity derivatives are deployed in the field of energy trading. The use of commodity derivatives for proprietary energy trading is only permitted within narrow limits and is monitored and managed with a separate limit system and robust risk indicators.

The maximum default risk for the assets recognised in the balance sheet, including derivatives with positive fair values, is equivalent to the carrying amounts recognised. The collateral held and other credit collateral available include margin payments received for market transactions, particularly in the energy trading business, as well as master set-off agreements.

The risks resulting from financial instruments are unchanged on the previous year, as are the methods used to measure and control risks.

Further information about the risk management system in place at MVV can be found in the Opportunity and Risk Report within the combined management report.

Default risks: The risk of economic loss arising as a result of a business partner failing to meet its contractual payment obligations is referred to as default risk. This encompasses both the risk of direct default and the risk of reduced creditworthiness. In its trading activities, MVV maintains its business relationships predominantly with banks and other trading partners of good credit standing. Moreover, risks are secured and structured with credit collateral and contractual mitigation mechanisms. Default risks for contractual partners are inspected upon conclusion of the contract and monitored continuously, with efforts being made to secure the credit exposure in the event of significant deteriorations in creditworthiness. This risk is limited by setting trading limits for transactions with business partners and, where appropriate, by demanding cash collateral. Where possible, default risk is already reduced in advance by means of suitable framework agreements with trading partners. In particular, commodity transactions are concluded on the basis of master agreements such as EFET, which ensure that detailed checks are performed on the counterparty's creditworthiness.

For trading transactions concluded with energy exchanges, security payments (margins) are deposited by our contract partners (counterparties) in order to reduce any additional default risks.

In the carrying amounts of financial assets, default risks have already been accounted for by way of write-downs. These are only stated for financial instruments that are measured at amortised cost. For financial instruments that are measured at fair value, the receivables default risk is already accounted for in the fair value.

IFRS 9 requires any expected credit loss to be accounted for by way of an impairment upon initial recognition of the respective asset already. These "expected" losses are determined using either the general or the simplified approach.

MVV has applied the simplified approach to determine the expected losses for trade receivables, contract assets and lease receivables. This requires recognition of a loss allowance equivalent to the credit losses expected over the lifetime of the instrument ("lifetime expected credit losses"). To determine loss allowances, MVV mostly works with a provision matrix based on historic default rates and with prospective and market data-based information, such as knowledge of economic developments at customers and macroeconomic data.

When using the provision matrix, financial instruments have to be allocated to different customer segments showing similar patterns of default. Our customer segments are based on the business models which are in turn mostly allocable to a similar geographical area.

Any internal or external ratings available for our customers are used as the basis for determining the expected credit losses.

Loss allowances for loans and other financial assets are determined using the general approach. This requires financial assets to be investigated in terms of their credit default risk and allocated to one of three stages of the impairment model in line with their respective development. The creditworthiness of the contract partner forms the basis for assessing credit default risk and is monitored on a regular basis.

All financial assets require allocation to Level 1 upon addition unless they were already impaired upon acquisition or issue. If the credit risk increases significantly after initial recognition, the respective assets are transferred to Level 2. The assessment as to whether credit risk has increased significantly in subsequent periods is made in a defined default risk management process. At MVV, a significant increase is assumed if the internal rating of the contract partner has deteriorated. Assets are transferred to Level 3 should there be any direct indications of impairment or actual default. A financial instrument is assumed to have defaulted when the asset is 720 days overdue. Financial assets are written down in full when, following a detailed review of the individual case, they are classified as being uncollectible.

For trade receivables, contract assets and lease receivables, MVV applies the simplified approach under IFRS 9 to determine the loss allowance. The development in loss allowances is presented in the following table:

Loss allowances (simplified approach)

Euro 000s	**FY 2022**	FY 2021
Balance at 1 October	21,555	19,034
Net balance of additions/reversals	18,220	6,586
Retirements	– 8,068	– 4,615
Change in scope of consolidation	– 12	322
Other	– 144	228
Balance at 30 September	**31,551**	**21,555**

Of the above loss allowance, Euro 30,551 thousand is attributable to trade receivables (previous year: Euro 20,573 thousand), Euro 709 thousand to contract assets (previous year: Euro 582 thousand) and Euro 291 thousand to lease receivables (previous year: Euro 400 thousand).

The default risks for financial assets for which no rating is available and the volume of lifetime expected credit losses and credit default rates for such assets are presented broken down by age group in the table below:

Receivables default risks (simplified approach) at 30 September 2022

Euro 000s	Gross carrying amount	Loss allowance	Credit default rate
not overdue	462,672	3,495	0.8%
overdue by			
< 89 days	29,381	3,086	10.5%
90 to 179 days	6,535	1,807	27.7%
180 to 359 days	4,925	3,146	63.9%
360 to 719 days	10,178	8,484	83.4%
> 719 days	11,695	11,384	97.3%
	525,386	**31,402**	

Receivables default risks (simplified approach) at 30 September 2021

Euro 000s	Gross carrying amount	Loss allowance	Credit default rate
not overdue	414,017	1,731	0.4%
overdue by			
< 89 days	29,354	502	1.7%
90 to 179 days	8,491	6,078	71.6%
180 to 359 days	3,022	914	30.2%
360 to 719 days	4,681	2,032	43.4%
> 719 days	10,723	10,153	94.7%
	470,288	**21,410**	

Impairments of Euro 149 thousand relate to assets whose loss allowances were determined on the basis of an internal or external rating (previous year: Euro 145 thousand).

Due to retirements of financial instruments, the loss allowances recognised for trade receivables changed by Euro 8,068 thousand in the 2022 financial year. The retirements relate to uncollectible receivables that had already been written down.

In the case of financial assets not eligible for application of the simplified approach provided for by IFRS 9, MVV applies the general approach to determine loss allowances within the expected loss model. This category mainly includes loans and other financial assets. The following reconciliation presents the development in the loss allowance determined using this method:

Loss allowance (general approach) at 30 September 2022

	12-month expected credit loss	**Lifetime expected credit loss**		**Total**
Euro 000s	**Level 1**	**Level 2**	**Level 3**	
Balance at 1 Oct 2021	10,732	–	384	11,116
Additions	2,232	–	–	2,232
Reversals	– 33	–	– 10	– 43
Retirements	– 8	–	–	– 8
Reclassifications	–	–	–	–
Other	–	–	–	–
Balance at 30 Sep 2022	**12,923**	**–**	**374**	**13,297**

Loss allowance (general approach) at 30 September 2021

	12-month expected credit loss	Lifetime expected credit loss		Total
Euro 000s	Level 1	Level 2	Level 3	
Balance at 1 Oct 2019	10,331	–	593	10,924
Additions	3,911	–	4	3,915
Reversals	– 2,036	–	–	– 2,036
Retirements	– 1,643	–	– 3	– 1,646
Reclassifications	270	–	– 270	–
Other	– 101	–	60	– 41
Balance at 30 Sep 2021	**10,732**	**–**	**384**	**11,116**

The breakdown of default risk by risk class is presented in the following overview:

Default risk (general approach) at 30 September 2022

Euro 000s	12-month expected credit loss Level 1	Lifetime expected credit loss Level 2	 Level 3	Total
Extremely secure contract partner	13,665	–	–	13,665
Secure contract partner	18,140	–	875	19,015
Acceptable contract partner	5,012	–	–	5,012
Speculative contract partner	–	–	–	–
Balance at 30 Sep 2022	**36,817**	**–**	**875**	**37,692**

Default risk (general approach) at 30 September 2021

Euro 000s	12-month expected credit loss Level 1	Lifetime expected credit loss Level 2	 Level 3	Total
Extremely secure contract partner	18,971	–	–	18,971
Secure contract partner	31,328	–	886	32,214
Acceptable contract partner	4,329	–	–	4,329
Speculative contract partner	102	–	–	102
Balance at 30 Sep 2021	**54,730**	**–**	**886**	**55,616**

Liquidity risks: Liquidity risk involves the risk of a company being unable to meet its financial obligations adequately. MVV is subject to liquidity risks as a result of its obligation to meet its liabilities in full and on time, as well as its obligation to service security payments (margins) from energy trading partners. The objective of MVV's cash and liquidity management is to maintain the company's solvency at all times. This involves calculating all cash requirements and all cash surpluses. The major subgroups have a cash pooling process which enables liquidity needs and surpluses to be balanced at short notice, thus reducing bank transactions to a necessary minimum. Where possible, wholly-owned subsidiaries are centrally financed by MVV Energie AG.

For liquidity management purposes, the company compiles rolling financial budgets which account for operating cash flows, investments, divestments and liquidity requirements in the energy trading business. The degree of detail applied in the budgets decreases from the short-term to the medium-term and long-term perspectives. Any detectible short-term financing requirement is covered within the liquidity management function by drawing on suitable instruments such as credit lines. Alongside the liquidity available on a daily basis, MVV has further liquidity reserves in the form of committed credit lines. The volume of contractually committed credit lines is structured in such a way as to ensure that the Group has adequate liquidity reserves available at all times, even in a difficult market climate. In view of its available liquidity and existing credit lines, MVV does not see itself as being exposed to any material liquidity risks.

Covenants customary to the industry have been agreed with some of the financing banks. These entitle the banks to terminate the facilities in the event of any material deterioration in the company's asset, financial and earnings position. All contractual conditions set out in the financing contracts had been complied with as of the balance sheet date on 30 September 2022.

Further information about financial debt, its maturities and committed credit lines can be found in Note **31.**

Items of security have been provided to banks to limit their risks in connection with loans granted to group companies. These are subdivided into receivables and cash and cash equivalents with a total amount of Euro 9,521 thousand (previous year: Euro 2,282 thousand) and interests in subsidiaries amounting to Euro 5,865 thousand (previous year: Euro 11,842 thousand).

Contractually agreed outflows of funds for financial liabilities are presented in undiscounted form in the table below. The figures include the corresponding interest payments.

Undiscounted cash flows

	30 September 2022			30 September 2021		
Euro 000s	**Maturities < 1 year**	**Maturities 1 - 5 years**	**Maturities > 5 years**	Maturities < 1 year	Maturities 1 - 5 years	Maturities > 5 years
Non-derivative financial liabilities						
Liabilities to banks	190,734	780,175	941,442	276,566	732,761	835,101
Lease liabilities	16,211	49,115	91,133	–	59,036	101,831
Trade payables	507,217	952	1,877	383,286	961	2,840
Other financial debt	7,008	17,223	19,838	7,624	9,543	16,236
Other financial liabilities	1,558,728	7,521	19,601	913,903	8,392	27,841
Derivative financial liabilities	13,177,212	3,425,217	–	7,716,265	1,115,275	–
	15,457,110	**4,280,203**	**1,073,891**	**9,297,644**	**1,925,968**	**983,849**

Market risks: Market risks mainly relate to interest rate, currency and commodity price risks. They arise due to changes in interest rates, exchange rates and commodity prices that could impact on MVV's earnings. Market risk management is charged with limiting any potentially negative impact of fluctuations in interest rates, exchange rates and commodity prices on the company's earnings by implementing a comprehensive hedging strategy and closing risk positions.

Interest rate risks: At MVV, interest rate risks mainly relate to floating-rate liabilities to banks. They result from any potential change in the reference interest rate underlying the hedged item.

MVV's interest rate risk management pursues the objective of minimising the nominal amount and volatility of interest expenses impacting on earnings and liquidity in order to reduce any negative impact of changes in interest rates on the company's performance and ability to pay dividends.

MVV limits its interest rate risks by financing its investment projects, where possible, with facilities with congruent terms and fixed interest rates. Furthermore, financing-related risks are also managed by using interest derivatives. These risks are hedged by working with interest swaps enabling a fixed interest rate to be paid and conversely a floating interest rate to be collected over the term of the instrument.

Hedging transactions are structured and concluded in a manner appropriate to the interest rate risks identified for the hedged item, thus creating a direct economic relationship. The hedging relationship is measured by reference to the scope of the risk thereby hedged. Furthermore, the hedging relationship accounts for specific parameters of the hedged item, such as its term and planning reliability.

The sensitivity analysis below presents the impact of changes in interest rates on annual earnings and equity. In this analysis, it is assumed that there are no changes in any other parameters, such as exchange rates. The analysis only includes financial instruments where interest rate risk could impact on equity or annual earnings. For the calculation, we have assumed that interest rates are 10 % higher or lower throughout the financial year.

Any upward or downward variance in the level of interest rates in the euro area by 10 % as of the balance sheet date on 30 September 2022 would, as in the previous year, not have led to any overall change in annual net income. This variance would have increased/decreased equity by a total of Euro 676 thousand/Euro 1,018 thousand (previous year: Euro 1,324 thousand/Euro 1,407 thousand).

The aforementioned measures mean that any interest rate risks arising are mainly hedged. The residual risk for MVV is of subordinate significance.

Currency risks: The Group is exposed to currency risks due to its international activities outside the euro currency area. These relate to work performed or received in foreign currencies, as well as to investments and their financing in foreign currencies.

Currency risks are monitored and managed on a decentralised basis by the major subgroups. The objective of currency risk management is to minimise any negative impact of exchange rate movements on the company's performance and ability to pay dividends, as well as to safeguard its solvency at all times in each relevant currency.

Currency risks are hedged by natural hedges in the form of currency-congruent financing and by using derivative financial instruments. In natural hedges, the cash flows and changes in the fair value of the hedged item and the hedging transaction cancel each other out. Derivative financial instruments in the form of forward exchange transactions are deployed to hedge the risks resulting from changes in the respective spot and forward rates.

Hedging transactions are structured and concluded in a manner appropriate to the currency risks identified for the hedged item, thus creating a direct economic relationship. The hedging relationship is measured by reference to the scope of the risk thereby hedged. Furthermore, the hedging relationship accounts for specific parameters of the hedged item, such as its term and planning reliability.

The aforementioned measures mean that currency risks are hedged in such a way that MVV is not exposed to any material risks. Given the subordinate significance of currency risks at the Group, no sensitivity analysis has been performed.

Commodity price risks: In connection with our energy trading activities, energy trading contracts are concluded for the purposes of risk management, adjustments to actual loads and margin optimisation. Price change risks chiefly arise in connection with the procurement and disposal of electricity and gas and the procurement of coal and emission rights. The risks resulting from these trading and portfolio optimisation activities are limited by setting narrow and clearly defined limit structures. Compliance with the set limits is monitored on an ongoing basis. Regular reporting is also provided on limit capacity. Commodity price risks are managed by the risk management function at our central trading company MVV Trading. Taking due account of the set limits, commodity price risks are hedged by, among other measures, using suitable derivative financial instruments and hedging strategies consistent with the applicable risk management guidelines. Price change simulations enable the potential impact on trading transactions to be determined. Continuous comparison with the trading limits set out in the risk management guidelines then makes it possible to actively manage the risk with corresponding hedging transactions on the market.

The hedging instruments used mainly involve forwards, futures and swaps. The hedging transactions are structured and concluded in a manner appropriate to the currency risks identified for the hedged item, thus creating a direct economic relationship. The price index for the hedging instruments is always selected in such a way that it is congruent with the hedged item. This means that the hedging instruments are exposed to the same commodity price risk as the hedged item. The objective of MVV's hedging activities is always to optimise and minimise risk across the entire portfolio and the existing underlying risks. In the company's procurement activities, the objective is to hedge purchase prices at the market level at which the respective sales contracts were concluded. To secure the generation capacities available at the Group, marketing prices are hedged, as are the corresponding variable production costs.

The sensitivity involved in measuring commodity derivatives is analysed in the following section. This analysis assumes that there are no changes in any other parameters and that there is mutual dependency between the commodities. The analysis only includes derivatives for which fluctuations in market values could impact on equity or annual earnings. These involve energy trading transactions recognised as derivatives in accordance with IFRS 9. The analysis does not include energy trading contracts earmarked for the physical delivery of non-financial items in line with the company's expected procurement, sale or utilisation ("own use"). These do not require recognition under IFRS 9.

If the market price had been 10 % higher/lower at the balance sheet date on 30 September 2022, this would have increased/decreased annual net income by Euro 201,866 thousand/Euro 194,381 thousand (previous year: Euro 55,828 thousand/Euro 2,063 thousand). Equity as of the same reporting date would have increased/decreased by Euro 152,504 thousand/ Euro – 91,906 thousand (previous year: Euro 43,524 thousand/Euro – 7,682 thousand.

The aforementioned reduction and management measures mean that commodity price risks are mainly hedged and the residual risks are of subordinate significance for MVV. The remaining residual risks are nevertheless assessed by MVV Trading, our central energy trading company, and are recorded in the risk management system, aggregated and monitored by the central group controlling function.

Derivative financial instruments and hedging relationships

For commodities, MVV deploys forwards, futures and swaps to hedge its commodity, interest rate and currency risks. Financial risks are hedged with interest swaps, while foreign exchange risks are hedged with forward exchange transactions and by way of currency-congruent financial liabilities.

The risks hedged for the hedged items correspond to the contractual terms of the hedging instruments thereby concluded. For commodity and financing risks, for example, the price risks and interest rate risks of the hedged item respectively correspond to the agreed price and interest rate index of the hedging instrument. Currency risks involved in financing activities are hedged using hedging transactions in the corresponding currency. For all hedging relationships, hedging instruments are concluded with the same nominal volume as the respective hedged item. Risks are thereby hedged at a ratio of 1:1. Selecting this hedging strategy means that hedging relationships can be expected to be highly effective on a prospective basis. The effectiveness of hedging transactions is determined in each case upon the commencement of the hedge and in regular prospective assessments using the critical terms match method. In addition, a retrospective measurement is performed using the dollar offset method to quantify the effectiveness or ineffectiveness.

The nominal volumes of derivatives are presented in the following table:

Nominal volumes by maturity

	30 September 2022			30 September 2021		
Euro 000s	< 1 year	1 - 5 years	> 5 years	< 1 year	1 - 5 years	> 5 years
Interest derivatives	21,496	151,464	250,667	154,194	202,762	169,371
Commodity derivatives	15,872,808	5,608,535	4,084	11,529,208	3,664,495	4,311
Currency derivatives	83,927	85,767	–	59,643	1,039	–
	15,978,231	**5,845,766**	**254,751**	**11,743,045**	**3,868,296**	**173,682**

The commodity derivatives can be broken down as follows:

Commodity derivatives

	30 September 2022		30 September 2021	
Euro 000s	Nominal volumes	Fair values	Nominal volumes	Fair values
Commodity derivatives				
Electricity	13,576,246	– 185,559	10,808,649	– 266,663
Coal	364,084	245,698	131,427	103,649
Gas	4,338,897	645,181	2,029,159	164,627
CO_2 rights	3,203,379	78,893	2,226,882	155,967
Other	2,821	– 1,583	1,897	– 479
	21,485,427	**782,630**	**15,198,014**	**157,101**
Commodity derivatives				
Futures	21,232,115	536,933	15,068,548	53,452
Swaps	253,312	245,697	129,466	103,649
	21,485,427	**782,630**	**15,198,014**	**157,101**

As derivative financial instruments may be subject to substantial fluctuations in their fair values, the counterparty risk of derivative financial assets has been presented in the following overview. No account has been taken of energy trading contracts not recognised as commodity derivatives.

The counterparty risks are analysed by reference to external information and ratings and classified by analogy with the rating categories at Standard & Poor's and/or Moody's

Counterparty risk is based on replacement and sales risks resulting from the fair values of the respective position with the individual trading partner as of the balance sheet date. The calculation takes due account of the netting options agreed with the trading partner in master agreements. If netting has been agreed, the positive and negative fair values are netted for each trading partner. Where no netting agreement is available, only the positive fair values are accounted for.

Counterparty risk at 30 September 2022

Euro 000s	**Total**		**of which < 1 year**		**of which > 1 year**	
Counterparty rating [1]	**Nominal value**	**Counterparty risk**	**Nominal value**	**Counterparty risk**	**Nominal value**	**Counterparty risk**
Without counterparty risk	9,871,847	13,193,861	7,193,442	9,881,788	2,678,405	3,312,073
AAA and Aaa to AA- and Aa3	1,132,604	4,011,286	836,705	3,379,216	295,899	632,070
A+ and A1 to A- and A3	509,161	358,516	89,381	224,541	419,780	133,975
BBB+ and Baa1 to BBB- and Baa3	167,962	944,276	126,016	728,199	41,946	216,077
BB+ and Ba1 to BB- and Ba3	6,466	60,283	5,615	53,312	851	6,971
	11,688,040	**18,568,222**	**8,251,159**	**14,267,056**	**3,436,881**	**4,301,166**

1 By analogy with rating categories at Standard & Poor's and/or Moody's

Counterparty risk at 30 September 2021

Euro 000s	Total		of which < 1 year		of which > 1 year	
Counterparty rating [1]	Nominal value	Counterparty risk	Nominal value	Counterparty risk	Nominal value	Counterparty risk
Without counterparty risk	4,469,022	4,710,482	3,402,100	4,013,372	1,066,922	697,110
AAA and Aaa to AA- and Aa3	2,260,723	3,415,395	1,642,067	2,933,964	618,656	481,431
A+ and A1 to A- and A3	136,867	27,452	135,100	24,296	1,767	3,156
BBB+ and Baa1 to BBB- and Baa3	121,332	202,454	95,957	175,857	25,375	26,597
BB+ and Ba1 to BB- and Ba3	143,357	197,013	112,493	175,161	30,864	21,852
	7,131,301	**8,552,796**	**5,387,717**	**7,322,650**	**1,743,584**	**1,230,146**

1 By analogy with rating categories at Standard & Poor's and/or Moody's

Cash flow hedges serve to hedge against fluctuations in future cash flows. At MVV, cash flow hedges are mainly deployed for commodities to hedge price risks on sales and procurement markets. Furthermore, MVV deploys cash flow hedges to limit the interest risk on floating-rate liabilities.

For interest hedges, existing hedged items were included in cash flow hedges with terms of up to 11 years as of 30 September 2022 (previous year: 12 years). For commodity hedges, the terms of planned hedges amount to up to five years (previous year: up to five years).

Both interest hedging instruments and commodity derivatives require net settlements to be paid at contractually fixed dates mainly corresponding to the hedged items.

In the year under report, MVV concluded hedging transactions with average interest rates of 0.90 % to 4.20 % to hedge against interest rate risks in its financing activities. The average hedged prices for commodity price risks range from Euro 145.61 to Euro 563.55 in the electricity business, Euro 27.25 to Euro 189.97 in the gas business and Euro 54.83 to Euro 64.74 for emission rights.

The following table presents the carrying amounts and nominal amounts, as well as changes in fair value, for the hedging instruments and hedged items deployed in cash flow hedging relationships:

Hedging relationships involving cash flow hedges at 30 September 2022

	Carrying amount of hedging instrument		**Nominal volume**	**Changes in fair value of hedging instrument**	**Changes in fair value of hedged item**
Euro 000s	**Other financial assets**	**Other financial liabilities**			
Commodity price risk	5,055,409	4,174,227	4,869,142	491,034	491,034
Interest rate risk	53,472	48	423,627	63,825	64,749
	5,108,881	**4,174,275**	**5,292,769**	**554,859**	**555,783**

Hedging relationships involving cash flow hedges at 30 September 2021

	Carrying amount of hedging instrument		Nominal volume	Changes in fair value of hedging instrument	Changes in fair value of hedged item
Euro 000s	Other financial assets	Other financial liabilities			
Commodity price risk	2,030,811	2,135,806	2,733,483	– 107,368	– 107,368
Interest rate risk	22	16,104	526,327	12,009	12,429
	2,030,833	**2,151,910**	**3,259,810**	**– 95,359**	**– 94,939**

Cash flow hedges had the following impact on MVV's statement of comprehensive income:

Impact of cash flow hedges on total comprehensive income at 30 Sep 2022

Euro 000s	**Hedging gains (+)/ losses (-) recognised in OCI**	**Ineffective-ness recognised through profit or loss**	**Reclassi-fication through profit or loss**
Commodity price risk	491,034	–	– 494,984
Interest rate risk	63,825	–	– 7,333
	554,859	**–**	**– 502,317**

Impact of cash flow hedges on total comprehensive income at 30 Sep 2021

Euro 000s	Hedging gains (+)/ losses (-) recognised in OCI	Ineffective-ness recognised through profit or loss	Reclassi-fication through profit or loss
Commodity price risk	– 107,368	–	– 18,189
Interest risk	12,009	–	– 10,299
	– 95,359	**–**	**– 28,488**

Cases of ineffectiveness resulting from cash flow hedges and their reclassification from other comprehensive income to profit or loss are recognised in the income statement line item in which the respective hedged item is also included. For commodity hedges, amounts of Euro 3,298,425 thousand and of Euro 2,803,441 thousand were reclassified through profit or loss and recognised under sales and cost of materials respectively in the 2022 financial year (previous year: Euro 382,198 thousand and Euro 364,009 thousand respectively). For interest rate hedges, an amount of Euro 7,333 thousand was reclassified through profit or loss and recognised under financing expenses (previous year: Euro 10,299 thousand). The reclassifications from equity through profit or loss to the income statement refer to hedged items realised in the financial year under report.

The following table shows the development in the cash flow hedge reserve:

Development in hedge reserve

Euro 000s	**FY 2022**	FY 2021
Balance at 1 October	– 121,001	– 54,440
Unrealised change in reserve for hedging costs		
Interest rate hedges	231	310
Unrealised change in cash flow hedge reserve		
Commodity hedges	491,034	– 107,368
Interest rate hedges	63,825	12,009
Reclassification through profit or loss		
Commodity hedges	494,984	18,189
Interest rate hedges	7,333	10,299
Balance at 30 September	**936,406**	**– 121,001**

Fair value hedges serve to hedge risks relating to changes in fair value. At MVV, the fair value hedge includes foreign-currency payments with hedged items of Euro 159,691 thousand. The hedging instrument deployed involves a bank liability in British pounds. Furthermore, fair value hedges are deployed to hedge the electricity price risk at proprietary generation plants. The hedging instrument deployed involves energy trading contracts.

As of 30 September 2022, existing hedged items were included in fair value hedges with terms of up to 10 years (previous year: 11 years).

The following table presents the carrying amounts and nominal volumes, as well as changes in the fair value, for the hedged items and hedging instruments deployed in fair value hedging relationships.

Hedging relationships involving fair value hedges at 30 September 2022						
	Carrying amount of hedging instrument			**Nominal volume**	**Changes in fair value of hedging instrument**	**Changes in fair value of hedged item**
Euro 000s	**Other financial assets**	**Other financial liabilities**	**Other financial debt**			
Currency risk	–	–	159,691	159,691	– 4,331	– 4,393
Commodity price risk	3,119	20,910	–	37,037	– 17,791	– 13,819
	3,119	**20,910**	**159,691**	**196,728**	**– 22,122**	**– 18,212**

Hedging relationships involving fair value hedges at 30 September 2021						
	Carrying amount of hedging instrument			Nominal volume	Changes in fair value of hedging instrument	Changes in fair value of hedged item
Euro 000s	Other financial assets	Other financial liabilities	Other financial debt			
Currency risk	–	–	179,017	179,017	10,827	10,819
	–	**–**	**179,017**	**179,017**	**10,827**	**10,819**

Fair value hedges had the following impact on MVV's statement of comprehensive income:

Impact of fair value hedges on total comprehensive income at 30 Sep 2022	
Euro 000s	**Ineffectiveness recognised through profit or loss**
Currency risk	62
Commodity price risk	– 3,972
	– 3,910

Impact of fair value hedges on total comprehensive income at 30 Sep 2021	
Euro 000s	Ineffectiveness recognised through profit or loss
Currency risk	8
	8

In the 2022 financial year, income from the ineffectiveness of a currency hedge was recognised in the financial result. The ineffectiveness resulted from slightly different nominal volumes of intragroup loans.

In the 2022 financial year, the ineffectiveness for commodities was recognised in other operating expenses.

Capital management
MVV Energie AG is not subject to any statutory minimum capital requirements, but pursues its internal objective of using effective financial management to maintain its equity ratio at a level necessary to attain a good implicit rating on the financial market and to boost the company's earnings strength.

The adjusted equity ratio referred to for management purposes presents adjusted consolidated equity as a proportion of adjusted total assets. Adjusted equity comprises all equity items reported in the consolidated financial statements, including non-controlling and minority interests, but excluding non-operating IFRS 9 derivative measurement items and the associated impact on deferred taxes. MVV intends to maintain an adjusted equity ratio of at least 30 %.

Measures to comply with the targeted equity ratio initially take place within the business planning process and within the framework of investment budgeting in the case of major (unplanned) investment measures. By retaining earnings and issuing shares, the company can basically adjust its equity base to requirements.

The key figure used in our value-based corporate management and the capital management thereby required is the value spread. This key figure is calculated as the difference between the period-based adjusted return on capital employed (adjusted ROCE) and the weighted average cost of capital (WACC).

There were no changes in the underlying capital management requirements compared with the previous year.

37. Segment reporting

Segment report from 1 October 2021 to 30 September 2022

Euro 000s	Adjusted external sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation and amortisation	Impairment losses
Customer Solutions	3,106,292	435,029	18,240	–
New Energies	579,280	308,880	91,309	339
Supply Reliability	387,430	845,550	74,661	264
Strategic Investments	125,405	27,763	11,742	–
Other Activities	1,090	43,193	14,707	–
Consolidation	–	– 1,660,415		–
	4,199,497	**–**	**210,659**	**603**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Income from companies recognised at equity	Investments
Customer Solutions	– 7,077	135,552	40,504	57,807
New Energies	18,545	149,841	5,343	109,264
Supply Reliability	8,454	37,348	7,924	134,600
Strategic Investments	2,251	17,996	10,488	11,370
Other Activities	2,942	12,414	254	21,568
Consolidation	–	–	–	–
	25,115	**353,151**	**64,513**	**334,609**

Segment report from 1 October 2020 to 30 September 2021

Euro 000s	Adjusted external sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation and amortisation	Impairment losses
Customer Solutions	3,101,020	287,665	21,057	–
New Energies	622,455	131,408	82,190	–
Supply Reliability	310,325	727,522	73,087	–
Strategic Investments	96,585	1,042	12,190	–
Other Activities	1,090	44,875	15,376	–
Consolidation	–	– 1,192,512	–	–
	4,131,475	**–**	**203,900**	**–**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Income from companies recognised at equity	Investments
Customer Solutions	2,935	46,524	13,683	34,117
New Energies	1,420	120,329	7,283	124,038
Supply Reliability	4,818	77,995	5,309	124,641
Strategic Investments	1,463	22,322	9,568	8,436
Other Activities	1,048	10,984	324	14,586
Consolidation	–		–	–
	11,684	**278,154**	**36,167**	**305,818**

External reporting is based on the internal management structure, thus complying with the management approach pursuant to IFRS 8. Units are groups in such a way that the pooling of specialist competence under one roof forms the basis for stringent portfolio management at the Group. Business fields based on the respective energy industry value chain stages have been allocated to the reporting segments of Customer Solutions, New Energies, Supply Reliability, Strategic Investments and Other Activities. The characteristics used to identify and aggregate the segments relate to the type of products and services, the type of production processes, the asset and capital intensity, customer structures and needs, the sales methods used and, where appropriate, the regulatory framework. Analytically, the business fields can be further broken down by subgroup and individual company with their products.

- The **Customer Solutions** reporting segment is subdivided into the business field of commodities, retail and business. It comprises the retail and secondary distribution business with electricity, heat, gas and water, the solutions business for all customer segments and the service and trading business at MVV Trading GmbH, Mannheim. The smart cities business field is also included in this reporting segment.

  The key focus of aggregation for these business fields relates to the service business and to customer needs. The customer is the key focus of the business, use is made of comparable service methods, activities and marketing processes for the customers are pooled and almost exclusively target external customers (e.g. sales to third parties.

- The energy from waste plants, biomass power plants, photovoltaics systems, wind turbines, biomethane plants and biogas plants are allocated to the **New Energies** reporting segment. Furthermore, this reporting segment also includes the renewable energies project development and operations management activities.

  The business fields aggregated in this segment focus on the provision of services, solutions and products in connection with renewable energies. The activities within this reporting segment involve the planning, approval, development, construction and operation of technical plants to generate electricity and heat from sustainable/partly sustainable commodities such as wind, waste timber, residual forest timber, green cuttings, waste/RDF, biogas and sunshine. The processes are characterised by long planning, approval, construction and operating stages.

- In addition to conventional energy generation, the **Supply Reliability** reporting segment also includes grid facilities for electricity, heat, gas and water. It comprises combined heat and power generation, grid facilities and further infrastructure required to provide our customers with a secure supply of electricity, heat, gas and water.

  The business fields aggregated in this segment serve to provide customers with a reliable and stable supply of various products. All facilities are characterised by high asset intensity, long technical lifecycles and long-term financing structures.

- The **Strategic Investments** reporting segment consists of the Köthen Energie and MVV Energie CZ subgroups and the at-equity results of select shareholdings in municipal utility companies.

- The **Other Activities** reporting segment consists in particular of the share service companies and cross-divisional functions.

- Consolidation includes figures for transactions with other reporting segments that are eliminated for consolidation purposes.

Intercompany sales represent the volume of sales between segments. Transfer prices between segments correspond to customary market terms. Segment sales prior to consolidation are equivalent to the total of intercompany and external sales.

The segment reporting presented pursuant to IFRS 8 is based on the internal management structure. This is mainly reflected in segment earnings (adjusted EBIT) and investments. The reconciliation of EBIT with adjusted EBIT is presented in the table below. In the management perspective, the concept of investments is basically aligned to payments for investments in the period under report as presented in the cash flow statement. Alongside payments for intangible assets, property, plant and equipment (adjusted for dismantling obligations) and investment properties, in the management perspective investments also include payments for the acquisition of fully consolidated companies and other business units and payments for other financial assets. In this concept, investments exclude additions to receivables for finance leases reported in other financial assets but rather include additions to unfinished products in connection with finance leases. Further items not included in this concept of investments are additions to securities and loans.

Consistent with the management approach, the earnings stated for the reporting segments include internal transfer relationships between the reporting segments (charges and credits). The distribution of reporting segment earnings presented in the "adjusted EBIT" column corresponds to the distribution of earnings referred to in internal reporting. In some cases, this means that items are charged or credited to earnings in other business fields, and thus in other reporting segments, than the field or segment in which the item responsible for such charge or credit is located. This applies to business fields fully or partly managed on the basis of cost centre logic (shared services and cross-divisional functions). Furthermore, when it comes to the generation of district heat the primary costs are incurred in operative terms in the Supply Reliability and New Energies reporting segments. These are charged to Customer Solutions. The latter reporting segment reimburses Supply Reliability and New Energies with a prorated return on their capital employed.

Segmentation is performed in the same way for all segments through to adjusted EBIT. The table below presents the reconciliation of earnings before interest and taxes (EBIT) with adjusted EBIT:

Reconciliation of EBIT (income statement) with adjusted EBIT

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021	+/– change
EBIT as per income statement	34,454	529,668	– 495,214
Measurement and realisation effects for derivatives	315,329	– 255,415	+ 570,744
Structural adjustment for part-time early retirement	–	1	– 1
Interest income from finance leases	3,368	3,900	– 532
Adjusted EBIT	**353,151**	**278,154**	**+ 74,997**

Reconciliation of external sales excluding energy taxes with adjusted external sales excluding energy taxes

Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021	+/– change
Sales after electricity and natural gas taxes	5,923,588	4,233,788	+ 1,689,800
Realisation effects for derivatives	– 1,724,091	– 102,313	– 1,621,778
Adjusted sales after electricity and natural gas taxes	**4,199,497**	**4,131,475**	**+ 68,022**

Of adjusted segment sales with external customers, 92.6 % were generated in Germany (previous year: 91.8 %). The regional breakdown of sales is based on the geographical location of the respective companies.

No individual customers of MVV account for 10 % or more of total sales.

38. Cash flow statement

The cash flow statement shows the flow of funds from operating activities, investing activities and financing activities. The cash flows from investing and financing activities are calculated directly. The cash flow from operating activities, on the other hand, has been derived indirectly. The amount of cash and cash equivalents stated in the cash flow statement is consistent with the corresponding figure in the balance sheet.

Inflows and outflows of funds from the acquisition and disposal of consolidated companies are included in the cash flow from investing activities.

Based on lower earnings before taxes (EBT) compared with the previous year, the elimination of non-cash and non-operating income and expenses led the cash flow before working capital and taxes to increase by Euro 63 million. The largest item in this elimination related to the non-cash-effective measurement of derivatives pursuant to IFRS 9. By contrast, this cash flow figure was negatively affected by the reclassification of non-operating income from the sale of fully consolidated and at-equity companies to the cash flow from investing activities.

The cash flow from operating activities fell year-on-year by Euro 251 million. This resulted above all from lower inflows of security deposits for counterparty default risk (margins). From an operating perspective, factors reducing the cash flow more significantly than in the previous year chiefly included the more marked rise in trade receivables due to the higher level of wholesale prices on energy markets and the higher increase in inventories. These factors were countered, with a correspondingly positive impact, in particular by the invoicing of project development work in the Juwi subgroup and the more marked rise in trade payables due to the higher level of wholesale prices on energy markets.

The development in the cash flow from investing activities was mainly shaped by higher proceeds from the sale of fully consolidated and at-equity companies in the period under report. These were countered by higher payments for the acquisition of companies in the current period – especially Avantag Energy S.a r.l. and Philipp Rass Energy GmbH – as well as by higher payments for investments in non-current assets. Overall, the cash flow from investing activities decreased year-on-year by Euro 70 million.

The cash flow from financing activities fell by Euro 100 million compared with the previous year, a development which mainly resulted from a lower volume of net new borrowing.

At 30 September 2022, MVV posted cash and cash equivalents of Euro 1,885 million (30 September 2021: Euro 1,258 million).

The reconciliation of liabilities in connection with financing activities is summarised in the following overview:

Liabilities in connection with financing activities

Euro 000s	30 Sep 2021	Cash-effective changes	Non-cash-effective changes: Change in scope of consolidation	Non-cash-effective changes: Changes in exchange rates	Non-cash-effective changes: Additions to leases	Non-cash-effective changes: Other adjustments	30 Sep 2022
Liabilities to banks	1,711,036	43,573	– 3,390	– 7,096	–	–	1,744,123
Lease liabilities	148,601	– 15,805	– 9,872	– 5	17,520	– 228	140,211
Other financial debt	26,639	5,960	–	2	–	–	32,601
	1,886,276	**33,728**	**– 13,262**	**– 7,099**	**17,520**	**– 228**	**1,916,935**

39. Related party disclosures

Business transactions performed between the parent company and its consolidated subsidiaries, which constitute related parties, are not outlined in this section, as they were eliminated in the course of consolidation.

The City of Mannheim is the sole shareholder in MKB Mannheimer Kommunalbeteiligungen GmbH. This company owns 99.99 % of the shares in MV Mannheimer Verkehr GmbH, which in turn has a 50.1 % shareholding in MVV Energie AG. The City of Mannheim and the companies it controls therefore represent related parties as defined in IFRS.

Numerous contractually agreed legal relationships are in place between the MVV companies and the City of Mannheim and the companies it controls (electricity, gas, water and district heat supply agreements, rental, leasing and service agreements). Moreover, concession agreements are also in place between MVV Energie AG and the City of Mannheim.

The concession duties to the City of Mannheim amounted to Euro 19,893 thousand (previous year: Euro 19,958 thousand).

All business agreements have been concluded on customary market terms and are basically analogous to the supply and service agreements concluded with other companies.

Related party disclosures

	Goods and services provided				Receivables		Liabilities	
	Income		Expenses					
Euro 000s	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021	**1 Oct 2021 to 30 Sep 2022**	1 Oct 2020 to 30 Sep 2021	**30 Sep 2022**	30 Sep 2021	**30 Sep 2022**	30 Sep 2021
City of Mannheim	9,843	9,302	24,037	25,674	507	885	7,786	4,147
Abfallwirtschaft Mannheim	11,649	9,912	1,722	1,515	1,562	1,617	6,061	422
GBG Mannheimer Wohnungsbaugesellschaft mbH	14,587	13,839	243	784	593	98	40	–
m:con - mannheim:congress GmbH	4,027	3,724	212	197	4,660	5,087	265	277
MKB Mannheimer Kommunalbeteiligungen GmbH	8	85	–	–	–	3	–	–
MV Mannheimer Verkehr GmbH	7	33	19	–	–	–	–	–
Rhein-Neckar-Verkehr GmbH	7,049	7,543	–	–	209	40	1,186	491
Stadtentwässerung Mannheim	1,489	2,227	336	304	56	240	15	–
Associates	6,207	5,313	1,281	1,277	927	1,568	1,628	1,842
Joint ventures	200,928	175,785	441,602	214,207	69,526	45,285	15,757	60,261
Other related parties	25,627	22,019	8,594	5,892	6,634	7,366	2,554	2,776
	281,421	**249,782**	**478,046**	**249,850**	**84,674**	**62,189**	**35,292**	**70,216**

The income and expenses with other related parties include income of Euro 43 thousand (previous year: Euro 18 thousand) and expenses of Euro 336 thousand (previous year: Euro 362 thousand) for goods and services provided to management staff performing key functions. There are no receivables or liabilities in this respect.

Pursuant to IAS 24, related parties include management staff performing key functions. These include the Executive and Supervisory Boards of MVV Energie AG.

Customer contracts concerning the supply of electricity, gas, water, district heat and energy-related services have been concluded between MVV Energie AG and members of its Executive and Supervisory Boards. These have been concluded on customary market terms and do not differ from other customer contracts.

MVV has otherwise not concluded or performed any material related party transactions. In particular, as in the previous year no loans or advances had been granted to members of the Executive or Supervisory Boards as of 30 September 2022. As in the previous year, the company also did not issue any guarantees on behalf of Executive or Supervisory Board members.

MVV Energie AG has compiled a dependent company report in accordance with § 312 AktG for the financial year ending on 30 September 2022. Furthermore, MVV Energie has established a process for recording and assessing related party transactions pursuant to §§ 111a et seq. AktG.

The disclosure requirements for the remuneration of management staff performing key functions at the Group cover the remuneration paid to members of the Executive and Supervisory Boards.

Total remuneration for management staff performing key functions amounted to Euro 5,868 thousand in the year under report (previous year: Euro 6,002 thousand). Of this total, Euro 4,076 thousand related to short-term benefits (previous year: Euro 3,650 thousand) while Euro 1,792 thousand involved post-employment benefits (previous year: Euro 2,352 thousand).

In the year under report, the Executive Board received short-term benefits of Euro 3,510 thousand (previous year: Euro 3,109 thousand). Short-term benefits include fixed remuneration of Euro 1,727 thousand (previous year: Euro 1,528 thousand), fringe benefits of Euro 141 thousand (previous year: Euro 125 thousand) and other remuneration, which includes remuneration paid for board positions held at subsidiaries and shareholdings, of Euro 36 thousand (previous year: Euro 37 thousand), as well as performance-related remuneration totalling Euro 1,606 thousand (previous year: Euro 1,419 thousand). This variable remuneration paid to Executive Board members comprises the annual bonus and sustainability bonuses 1 and 2. Compared with the annual bonus, the sustainability bonuses account for the predominant share of variable remuneration paid to the Executive Board members of MVV Energie AG.

The annual bonus is based on the adjusted EBIT achieved by MVV in the respective past financial year. Sustainability bonuses 1 and 2 are linked to the long-term increase in the company's value and are based on the ROCE and WACC key figures. Sustainability bonus 1 is paid if the bonus-relevant ROCE exceeds the minimum return specified by the Supervisory Board each year over a three-year period. Sustainability bonus 2 is granted if the bonus-relevant ROCE (as an average for the past three years) exceeds the costs of capital (also as an average for the past three years). The bonus components are paid out each year. No more far-reaching long-term remuneration targets have been agreed. There are no share-based remuneration agreements or comparable instruments.

Pension provisions of Euro 8,097 thousand were recognised as of 30 September 2022 for the members of the Executive Board (previous year: Euro 12,278 thousand). The service cost for post-employment benefits amounts to Euro 1,792 thousand (previous year: Euro 2,352 thousand).

Active Supervisory Board members were remunerated as follows:

Supervisory Board remuneration

Euro 000s	**FY 2022**	FY 2021
Fixed remuneration (including meeting allowances)	566	541

Former members of the Executive Board received benefits of Euro 755 thousand in the year under report (previous year: Euro 725 thousand). Provisions totalling Euro 13,076 thousand have been stated for pension obligations towards former Executive Board members (previous year: Euro 18,310 thousand). A total of Euro 161 thousand was allocated to this item in the year under report (previous year: Euro 122 thousand).

40. MVV's shareholdings

List of MVV's shareholdings at 30 September 2022

	Town/city	Country	Share of capital %[1]	Footnotes
Fully consolidated subsidiaries				
Associates (Germany)				
AVA Abwasser- und Verwertungsanlagen GmbH	Mörfelden-Walldorf	Germany	100.00	4
beegy GmbH (previously: Zschau GmbH)	Mannheim	Germany	100.00	4
BEG Gernsbacher Höhe UG (haftungsbeschränkt) & Co. KG	Mainz	Germany	0.00	7
BFE Institut für Energie und Umwelt GmbH	Mühlhausen	Germany	100.00	4
Biokraft Naturbrennstoffe GmbH	Offenbach am Main	Germany	100.00	
Cerventus Naturenergie GmbH	Offenbach am Main	Germany	50.00	
Cerventus Naturenergie Verwaltungs GmbH	Offenbach am Main	Germany	100.00	
Dabit Grundstücksverwaltungsgesellschaft mbH & Co. Vermietungs KG	Mainz	Germany	94.00	
DC-Datacenter-Group GmbH	Wallmenroth	Germany	100.00	
econ solutions GmbH	Munich (dom.: Mannheim)	Germany	100.00	4
En/Da/Net GmbH	Erfurt	Germany	100.00	4
Energienetze Offenbach GmbH	Offenbach am Main	Germany	100.00	4
Energieversorgung Dietzenbach GmbH	Dietzenbach	Germany	50.00	
Energieversorgung Offenbach Aktiengesellschaft	Offenbach am Main	Germany	48.42	2
eternegy GmbH	Mannheim	Germany	100.00	
EVO Ressourcen GmbH	Offenbach am Main	Germany	100.00	4
Fernwärme Rhein-Neckar GmbH	Mannheim	Germany	100.00	4
FRASSUR GmbH Umweltschutz-Dienstleistungen	Mörfelden-Walldorf	Germany	100.00	
Gasversorgung Offenbach GmbH	Offenbach am Main	Germany	74.90	
Gesellschaft für Hochspannungsbau Offenbach mbH	Offenbach am Main	Germany	100.00	
IGS Netze GmbH	Gersthofen	Germany	100.00	4
Infrastruktur Oberheimbach II GmbH & Co. KG	Wörrstadt	Germany	72.00	
Infrastruktur Waldweiler GmbH & Co. KG	Wörrstadt	Germany	60.40	
Infrastrukturgesellschaft Hungerberg GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Infrastrukturgesellschaft Veldenz GmbH & Co. KG	Wörrstadt	Germany	61.86	
iwo Pellet Rhein - Main GmbH	Offenbach am Main	Germany	100.00	
juwi Bestandsanlagen GmbH	Wörrstadt	Germany	100.00	4
JUWI GmbH	Wörrstadt	Germany	100.00	
juwi Wind Germany 135 GmbH & Co. KG	Wörrstadt	Germany	75.45	
juwi Wind Germany 162 GmbH & Co. KG	Wörrstadt	Germany	80.00	
juwi Wind Germany 180 GmbH & Co. KG	Wörrstadt	Germany	44.80	
juwi Wind Germany 190 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 203 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 213 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 219 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 223 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 33 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany Verwaltungs GmbH	Wörrstadt	Germany	100.00	
Köthen Energie GmbH	Köthen (Anhalt)	Germany	100.00	
MDW Muldendienst West GmbH	Frankfurt am Main	Germany	100.00	
MVV Alpha drei GmbH	Mannheim	Germany	100.00	4
MVV Alpha eins GmbH (previously: beegy GmbH)	Mannheim	Germany	100.00	
MVV Alpha fünfzehn GmbH	Mannheim	Germany	100.00	4
MVV Biogas GmbH (previously: MVV Biogas Dresden GmbH)	Mannheim	Germany	100.00	
MVV Biomethan GmbH	Mannheim (dom.: Wanzleben-Börde)	Germany	100.00	4

List of MVV's shareholdings at 30 September 2022

	Town/city	Country	Share of capital % [1]	Footnotes
MVV Enamic GmbH	Mannheim	Germany	100.00	4
MVV Enamic Korbach GmbH	Korbach	Germany	100.00	4
MVV Enamic Ludwigshafen GmbH	Mannheim	Germany	100.00	
MVV Enamic Naturenergie GmbH	Mannheim	Germany	100.00	
MVV EnergySolutions GmbH	Mannheim	Germany	100.00	4
MVV Grüne Wärme GmbH	Mannheim	Germany	100.00	4
MVV ImmoSolutions GmbH	Berlin (dom.: Mannheim)	Germany	100.00	4
MVV Industriepark Gersthofen GmbH	Gersthofen	Germany	100.00	4
MVV Netze GmbH	Mannheim	Germany	100.00	4
MVV RHE GmbH	Mannheim	Germany	100.00	4
MVV Trading GmbH	Mannheim	Germany	100.00	4
MVV Umwelt Asset GmbH	Mannheim	Germany	100.00	4
MVV Umwelt GmbH	Mannheim	Germany	100.00	4
MVV Umwelt Ressourcen GmbH	Mannheim	Germany	100.00	4
MVV Windenergie GmbH	Mannheim	Germany	100.00	4
Netzgesellschaft Köthen mbH	Köthen (Anhalt)	Germany	100.00	4
New Breeze GmbH	Wörrstadt	Germany	100.00	
Philipp Rass Energy GmbH	Trier	Germany	100.00	5
RZ-Products GmbH	Wallmenroth	Germany	100.00	
Soluvia Energy Services GmbH	Offenbach am Main	Germany	100.00	
Soluvia IT-Services GmbH	Kiel	Germany	100.00	
Stadtwerke Kiel Aktiengesellschaft	Kiel	Germany	51.00	
SWKiel Netz GmbH	Kiel	Germany	100.00	4
SWKiel Speicher GmbH	Kiel	Germany	100.00	4
Umspannwerk Kirchberg 2 GmbH & Co. KG	Wörrstadt	Germany	51.60	
Windpark Albisheim GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Dirlammen GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Hungerberg I GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Hungerberg II GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Kirchberg GmbH & Co. KG	Offenbach am Main	Germany	100.00	

List of MVV's shareholdings at 30 September 2022	Town/city	Country	Share of capital % [1]	Footnotes
Fully consolidated subsidiaries				
Associates (international)				
AVANTAG Energy s.à r.l.	Wecker	Luxembourg	100.00	5
Cactus Garden Solar LLC	Delaware	USA	100.00	
Corsoleil EURL i.L.	Saint Florent	France	100.00	
CTZ s.r.o.	Uherské Hradiště	Czech Republic	50.96	
e.services s.r.o.	Děčín	Czech Republic	100.00	
Electaparc S.A.	Montevideo	Uruguay	100.00	
ENERGIE Holding a.s.	Prague	Czech Republic	100.00	
G-LINDE s.r.o.	Prague	Czech Republic	100.00	
G-RONN s.r.o.	Prague	Czech Republic	100.00	
IROMEZ s.r.o.	Pelhřimov	Czech Republic	100.00	
JSI 01 Srl	Verona	Italy	100.00	
JSI Construction Group LLC	Delaware	USA	100.00	
JSI Equipment Purchasing Inc.	Delaware	USA	100.00	
JSI Equipment Solutions LLC	Delaware	USA	100.00	
JSI Milford Realty Company LLC	Delaware	USA	100.00	
JSI O&M Group LLC	Delaware	USA	100.00	
juwi Development 02 Srl	Verona	Italy	100.00	
juwi Development 08 Srl	Verona	Italy	100.00	
juwi Energie Rinnovabili Srl	Verona	Italy	100.00	
juwi Energy Services (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Hellas Renewable Energy Sources Single Member S.A.	Athens	Greece	100.00	
juwi Holding US LLC	Delaware	USA	100.00	
juwi Inc.	Delaware	USA	100.00	
juwi India Renewable Energies Private Limited	Bengaluru	India	100.00	
juwi Philippines Inc.	Pasay City	Philippines	99.99	
juwi Renewable Energies (Pty) Ltd.	Cape Town	South Africa	100.00	
juwi Renewable Energies Limited	London	UK	100.00	
juwi renewable energies Pvt. Ltd.	Singapore	Singapore	100.00	
juwi Renewable Energies Thai Co., Ltd.	Bangkok	Thailand	100.00	
juwi Renewable Energy Pty. Ltd.	Brisbane	Australia	100.00	
juwi Singapore Projects Pvt. Ltd.	Singapore	Singapore	100.00	
juwi Solar ZA Construction 1 (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Solar ZA Construction 2 (Pty) Ltd.	Cape Town	South Africa	92.00	
juwi Solar ZA Construction 3 (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Solar ZA Construction 4 (Pty) Ltd.	Cape Town	South Africa	60.00	
juwi Solar ZA O&M 1 (Pty) Ltd.	Cape Town	South Africa	49.00	
juwi Solar ZA O&M 2 (Pty) Ltd.	Cape Town	South Africa	100.00	
juwi Viet Nam Company Limited	Hanoi	Vietnam	100.00	
juwi Wind LLC	Delaware	USA	100.00	
MVV Energie CZ a.s.	Prague	Czech Republic	100.00	
MVV Environment Baldovie Energy Limited	Dundee	UK	100.00	
MVV Environment Baldovie Limited	Dundee	UK	100.00	
MVV Environment Baldovie Waste Limited	Dundee	UK	100.00	
MVV Environment Devonport Limited	Plymouth	UK	100.00	
MVV Environment Limited	Plymouth	UK	100.00	
MVV Environment Ridham Limited	Sittingbourne / Iwade	UK	100.00	

List of MVV's shareholdings at 30 September 2022	Town/city	Country	Share of capital %[1]	Footnotes
MVV Environment Services Limited	Plymouth	UK	100.00	
OPATHERM a.s.	Opava	Czech Republic	100.00	
POWGEN a.s.	Prague	Czech Republic	100.00	
Rocky Mountain Solar LLC	Delaware	USA	100.00	
Teplárna Liberec, a.s.	Liberec	Czech Republic	76.04	
TERMIZO a.s.	Liberec	Czech Republic	100.00	
TERMO Děčín a.s.	Děčín	Czech Republic	96.91	
Zásobování teplem Vsetín a.s.	Vsetín	Czech Republic	100.00	
ČESKOLIPSKÁ TEPLÁRENSKÁ a.s.	Česká Lípa	Czech Republic	75.00	
Českolipské teplo a.s.	Prague	Czech Republic	100.00	
Unconsolidated other shareholdings				
Associates (Germany)				
Blue Village FRANKLIN Mobil GmbH	Mannheim	Germany	100.00	
Erschließungsträgergesellschaft Weeze mbH	Weeze	Germany	75.00	
EVO Vertrieb GmbH	Offenbach am Main	Germany	100.00	
juwi Wind Germany 126 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 127 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 128 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 192 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 197 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 200 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 204 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 205 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 214 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 218 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 220 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 221 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 224 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 225 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 226 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 227 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 228 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 229 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 230 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 231 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 232 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 233 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 234 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 235 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 236 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 237 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 238 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 239 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 240 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 241 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
luminatis Deutschland GmbH	Landau in der Pfalz	Germany	100.00	

List of MVV's shareholdings at 30 September 2022	Town/city	Country	Share of capital % [1]	Footnotes
MVV Alpha zwei GmbH	Mannheim	Germany	100.00	4
MVV Insurance Services GmbH	Mannheim	Germany	100.00	
MVV Regioplan GmbH	Mannheim	Germany	100.00	4
MVV Windpark Verwaltungs GmbH	Mannheim	Germany	100.00	
PEJO Elektrotechnik GmbH	Mannheim	Germany	100.00	
Windpark Hellenthal Wiesenhardt GmbH & Co. KG	Wörrstadt	Germany	100.00	
Windpark Mußbach GmbH & Co. KG	Wörrstadt	Germany	100.00	
Windpark Wiebelsheim GmbH & Co. KG	Wörrstadt	Germany	100.00	
Windwärts Betriebs- und Beteiligungsgesellschaft mbH	Hanover	Germany	100.00	
Windwärts Projektmanagement GmbH	Hanover	Germany	100.00	
Unconsolidated other shareholdings				
Associates (international)				
Achab Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Alachua Solar LLC	Delaware	USA	100.00	
Axial Basin Solar LLC	Delaware	USA	100.00	
Baca Solar LLC	Delaware	USA	100.00	
Belviworx (Pty) Ltd.	Cape Town	South Africa	100.00	
Bench Solar LLC	Delaware	USA	100.00	
Blue Creek Solar LLC	Delaware	USA	100.00	
Boxelder Creek Solar LLC	Delaware	USA	100.00	5
Cache Valley Solar LLC	Delaware	USA	100.00	
Castle Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Chapeno Solar LLC	Delaware	USA	100.00	
Chico Creek Solar LLC	Delaware	USA	100.00	
Chino Valley Solar LLC	Delaware	USA	100.00	
Coalbank Creek Solar LLC	Delaware	USA	100.00	5
Coyote Gulch Solar LLC	Delaware	USA	100.00	
Crystal Springs Solar LLC	Delaware	USA	100.00	5
Delareyville Solar Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Dolores Canyon Solar LLC	Delaware	USA	100.00	
Durbavert (Pty) Ltd.	Cape Town	South Africa	100.00	
Fairforest Solar LLC	Delaware	USA	100.00	
Hartebeest Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Hotazel Solar Farm 1 (Pty) Ltd.	Cape Town	South Africa	100.00	
Hotazel Solar Farm 2 (Pty) Ltd.	Cape Town	South Africa	100.00	
JSI Procurement Group LLC	Delaware	USA	100.00	
JSI Rockfish Realty LLC	Delaware	USA	100.00	
juwi Devco Pty. Ltd.	Brisbane	Australia	100.00	
juwi Development 01 Srl	Verona	Italy	100.00	
juwi Development 03 Srl	Verona	Italy	100.00	
juwi Development 04 Srl	Verona	Italy	100.00	
juwi Development 05 Srl	Verona	Italy	100.00	
juwi Development 06 Srl	Verona	Italy	100.00	
juwi Development 07 Srl	Verona	Italy	100.00	
juwi Development 09 Srl	Verona	Italy	100.00	
juwi Development 10 Srl	Verona	Italy	100.00	5

List of MVV's shareholdings at 30 September 2022

	Town/city	Country	Share of capital % [1]	Footnotes
juwi Development 11 Srl	Verona	Italy	100.00	5
juwi Development 12 Srl	Verona	Italy	100.00	5
juwi Development 13 Srl	Verona	Italy	100.00	5
juwi Development 14 Srl	Verona	Italy	100.00	5
juwi Development 15 Srl	Verona	Italy	100.00	5
juwi Energy Services 2 (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Solar ZA Construction 9 (Pty) Ltd.	Cape Town	South Africa	60.00	
JWT Asset Co., Ltd.	Bangkok	Thailand	49.80	6
Kaip Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Kalahanai Solar LLC	Delaware	USA	100.00	
Kap Vley Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Kenhardt PV1 (Pty) Ltd.	Cape Town	South Africa	100.00	
Kenhardt PV2 (Pty) Ltd.	Cape Town	South Africa	100.00	
Kenhardt PV3 (Pty) Ltd.	Cape Town	South Africa	100.00	
Kiowa Solar LLC	Delaware	USA	100.00	
Koppie Enkel Solar Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Kronos Solar Farm 1 (Pty) Ltd.	Cape Town	South Africa	100.00	
Kronos Solar Farm 2 (Pty) Ltd.	Cape Town	South Africa	100.00	
Kronos Solar Farm 3 (Pty) Ltd.	Cape Town	South Africa	100.00	
La Garita Solar LLC	Delaware	USA	100.00	
Marovax (Pty) Ltd.	Cape Town	South Africa	100.00	
Moffat Solar LLC	Delaware	USA	100.00	
Monarch Solar LLC	Delaware	USA	100.00	
Muleshoe Solar LLC	Delaware	USA	100.00	
Namies Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
North Platte Solar LLC	Delaware	USA	100.00	5
Oasis Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Ophir Canyon Solar I LLC	Delaware	USA	100.00	
Ophir Canyon Solar II LLC	Delaware	USA	100.00	
Ophir Canyon Solar LLC	Delaware	USA	100.00	
Outeniqua Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Paradox Valley Solar LLC	Delaware	USA	100.00	
Pike Solar LLC	Delaware	USA	100.00	
Pronghorn Solar LLC	Delaware	USA	100.00	
Rifle Gap Solar LLC	Delaware	USA	100.00	5
Royal Slope Solar LLC	Delaware	USA	100.00	
Saddle Mountain Solar LLC	Delaware	USA	100.00	
San Carlos Solar LLC	Delaware	USA	100.00	
Sherman Solar LLC	Delaware	USA	100.00	
Sierra Mojada Solar LLC	Delaware	USA	100.00	
Sierra Vista Solar LLC	Delaware	USA	100.00	
Silver Moon Solar LLC	Delaware	USA	100.00	
Sky Prairie Solar LLC	Delaware	USA	100.00	5
Skyview Solar LLC	Delaware	USA	100.00	
Spanish Peaks II Solar LLC	Delaware	USA	100.00	
Spanish Peaks Solar LLC	Delaware	USA	100.00	
Stansburry Solar II LLC	Delaware	USA	100.00	
Vredendal Solar Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Wildebeest Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Zingesele Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	

List of MVV's shareholdings at 30 September 2022

	Town/city	Country	Share of capital % [1]	Footnotes
At equity				
Joint ventures (Germany)				
ABeG Abwasserbetriebsgesellschaft mbH	Dietzenbach	Germany	49.00	
Allegro engineering GmbH	Markranstädt-Thronitz	Germany	30.00	
AvanLog Solar GmbH	Rosental (dom.: Munich)	Germany	50.00	5
AVR BioGas GmbH	Sinsheim	Germany	41.50	
BEEGY Operations GmbH	Mannheim	Germany	51.00	
Biomasse Rhein-Main GmbH	Flörsheim am Main	Germany	33.33	
Gemeinschaftskraftwerk Kiel Gesellschaft mit beschränkter Haftung	Kiel	Germany	50.00	
GeoHardt GmbH	Schwetzingen	Germany	50.00	
Grosskraftwerk Mannheim Aktiengesellschaft	Mannheim	Germany	28.00	
Infrastruktur Donnersberg GmbH & Co. KG	Wörrstadt	Germany	22.91	
Mainnetz GmbH	Obertshausen	Germany	25.10	
Qivalo GmbH	Mannheim	Germany	42.50	
ReNabi GmbH	Mannheim	Germany	51.00	
sMArt City Mannheim GmbH	Mannheim	Germany	50.00	
Solventus GmbH & CO. KG	Kiel	Germany	50.00	5
Solventus Verwaltungsgesellschaft mbH	Kiel	Germany	50.00	5
Stadtwerke Ingolstadt Beteiligungen GmbH	Ingolstadt	Germany	48.40	
Stadtwerke Sinsheim Versorgungs GmbH & Co. KG	Sinsheim	Germany	30.00	
SWT Solar GmbH	Trier	Germany	55.00	5
Umspannwerk Donnersberg GmbH & Co. KG	Wörrstadt	Germany	22.91	
Windpark Worms Repowering GmbH & Co. KG	Wörrstadt	Germany	100.00	
wärme.netz.werk Rhein-Neckar GmbH	Heidelberg	Germany	33.34	
At equity				
Joint ventures (international)				
juwi Shizen Energy Inc.	Tokyo	Japan	50.00	
At equity				
Associates (Germany)				
ESN EnergieSystemeNord GmbH	Schwentinental	Germany	25.00	
Infrastrukturgesellschaft Erbes-Büdesheim GmbH & Co. KG	Wörrstadt	Germany	22.36	
juwi Wind Germany 100 GmbH & Co. KG	Wörrstadt	Germany	34.32	
Naturenergie Main-Kinzig GmbH	Gelnhausen	Germany	50.00	
Netzgesellschaft Edingen-Neckarhausen GmbH & Co. KG	Edingen-Neckarhausen	Germany	24.00	
Phoenix Energie GmbH	Hanover	Germany	0.05	8
Stadtwerke Buchen GmbH & Co. KG	Buchen-Odenwald	Germany	25.10	
Zweckverband Wasserversorgung Kurpfalz	Mannheim (dom.: Heidelberg)	Germany	51.00	3

List of MVV's shareholdings at 30 September 2022

	Town/city	Country	Share of capital %[1]	Footnotes
At equity				
Associates (international)				
juwi Shizen Energy Operation Inc.	Tokyo	Japan	30.00	
Other minority shareholdings				
(Germany)				
8KU GmbH	Berlin	Germany	12.50	
Infrastruktur Oberheimbach I GmbH & Co. KG	Wörrstadt	Germany	15.00	
Infrastrukturgesellschaft Bischheim GmbH & Co. KG	Wörrstadt	Germany	15.31	
juwi Wind Germany 129 GmbH & Co. KG	Wörrstadt	Germany	16.00	
Klimaschutzagentur Mannheim gemeinnützige GmbH	Mannheim	Germany	40.00	
Main-Kinzig-Entsorgungs- und Verwertungs GmbH	Gelnhausen	Germany	49.00	
Management Stadtwerke Buchen GmbH	Buchen-Odenwald	Germany	25.20	
RIO Holzenergie GmbH & Co. Langelsheim KG	Wörrstadt	Germany	37.55	
Stadtmarketing Mannheim GmbH	Mannheim	Germany	3.09	
Stadtwerke Langen Gesellschaft mit beschränkter Haftung	Langen	Germany	10.00	4
Stadtwerke Schwetzingen GmbH & Co. KG	Schwetzingen	Germany	10.00	
Stadtwerke Schwetzingen Verwaltungsgesellschaft mbH	Schwetzingen	Germany	10.00	
Stadtwerke Sinsheim Verwaltungs GmbH	Sinsheim	Germany	30.00	
Stadtwerke Walldorf GmbH & Co. KG	Walldorf	Germany	25.10	
Stadtwerke Walldorf Verwaltungs GmbH	Walldorf	Germany	25.10	
SWT Regionale Erneuerbare Energien GmbH	Trier	Germany	51.00	
Wasserversorgungsverband Neckargruppe	Edingen-Neckarhausen	Germany	25.00	
WiWi Windkraft GmbH & Co. Westpfalz KG	Wörrstadt	Germany	5.32	
WVE Wasserversorgungs- und -entsorgungsgesellschaft Schriesheim mbH	Schriesheim	Germany	24.50	

1 Share of capital at 30 September 2022 pursuant to § 16 (4) AktG; equity and annual net income pursuant to HGB or local requirements

2 Majority of voting rights

3 No voting right majority

4 Profit transfer/operating profit transfer agreement

5 Added in financial year

6 Controlling influence

7 Citizens' energy company at the Group

8 Significant influence

Further disclosures can be found in the list of shareholdings of MVV Energie AG.

41. Auditor's fee

The following fees were incurred in Germany for the services performed by the auditor of the consolidated financial statement, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, in the 2022 financial year:

Auditor's fee

Euro 000s	**FY 2022**	FY 2021
Audit services	2,257	2,166
Other audit services	420	486
Tax advisory services	94	54
Other services	608	333
	3,379	**3,039**

The audit services line item relates above all to the fees paid for the audit of the consolidated financial statements and the audit of the separate financial statements of MVV Energie AG and its subsidiaries. The fees paid for other audit services mainly involve audits performed in accordance with energy industry requirements/attestations (EEG, KWKG) and voluntary certification services. The tax advisory services line item particularly involves fees for support provided in the context of external audits and tax advisory services in the field of transfer prices. The fees paid for other services chiefly include fees for market advisory services in connection with obtaining comparative figures.

42. Utilisation of § 264 (3) HGB

The following German subsidiaries will draw on the disclosure exemption provided for under § 264 (3) HGB for the 2022 financial year:

- BFE Institut für Energie und Umwelt GmbH, Mühlhausen
- MVV Alpha zwei GmbH, Mannheim
- MVV Alpha drei GmbH, Mannheim
- MVV Alpha fünfzehn GmbH, Mannheim
- MVV Grüne Wärme GmbH, Mannheim
- MVV Umwelt GmbH, Mannheim
- MVV Umwelt Ressourcen GmbH, Mannheim

43. Declaration of Compliance (§ 161 AktG)

The Executive and Supervisory Boards of MVV Energie AG refer to the management report in respect of the Declaration of Compliance with the recommendations made by the German Corporate Governance Code.

The complete declaration is published on the internet at **www.mvv.de/investors.**

44. Information on concessions

In addition to the concession agreements between the City of Mannheim and MVV Energie AG (see Note 39 Related party disclosures), further concession agreements have also been concluded between MVV companies and local and regional authorities. The remaining terms range from 8 to 20 years. These agreements assign responsibility for operating the respective distribution grids and providing for their maintenance. Should these agreements not be extended upon expiry, the facilities for supplying the respective utility services must be taken over by the new concession holder upon payment of commensurate compensation.

45. Events after balance sheet date

We are not aware of any events after the balance sheet date.

Mannheim, 14 November 2022

MVV Energie AG

Executive Board

Dr. Georg Müller | Verena Amann | Ralf Klöpfer | Dr. Hansjörg Roll

Responsibility Statement

"We affirm that, to the best of our knowledge, the consolidated financial statements give a true and fair view of the net asset, financial and earnings position of the Group in accordance with applicable accounting principles and that the group management report provides a fair view of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risk associated with the expected development of the Group."

Mannheim, 14 November 2022

MVV Energie AG

Executive Board

Dr. Georg Müller	Verena Amann	Ralf Klöpfer	Dr. Hansjörg Roll

Directors and Officers

EXECUTIVE BOARD OF MVV ENERGIE AG

Dr. Georg Müller
CEO, Commercial Affairs

Verena Amann
Personnel and Labour Director

Daniela Kirchner
Commercial Affairs
(from 1 January 2022
to 30 September 2022)

Ralf Klöpfer
Sales

Dr. Hansjörg Roll
Technology

SUPERVISORY BOARD OF MVV ENERGIE AG

Dr. Peter Kurz
(Chairman)
Lord High Mayor of City of Mannheim

Heike Kamradt-Weidner [1]
(Deputy Chairwoman)
Chairwoman of Group Works Council

Johannes Böttcher [1]
Work Safety Specialist
at Energieversorgung Offenbach AG
(until 26 October 2022)

Angelo Bonelli [1]
Trade Union Secretary
ver.di Baden-Württemberg State District

Timo Carstensen [1]
Deputy Chairman of Works Council of
Stadtwerke Kiel AG

Sabine U. Dietrich
Supervisory Board Member, Consultant

Detlef Falk [1]
Chairman of Works Council of Stadtwerke Kiel AG

Martin F. Herrmann
Business Angel, Mentor

Barbara Hoffmann
Auditor, Tax Advisor

Dr. Simon Kalvoda [1]
Head of Facility Management Division at
MVV Energie AG
(since 1 October 2022)

Gregor Kurth
Partner; Igneo Infrastructure Partners (Igneo),
London, UK

Thoralf Lingnau [1]
Member of Works Council of MVV Energie AG

Dr. Lorenz Näger
Former Deputy Chairman of Executive Board and CFO
of HeidelbergCement AG

Erik Niedenthal [1]
Chairman of Works Council of
Energieversorgung Offenbach AG
(since 27 October 2022)

Tatjana Ratzel
Lawyer, Head of Department
INTER Krankenversicherung AG Mannheim

Thorsten Riehle
Managing Director of Capitol-Betriebs GmbH Mannheim

Andreas Schöniger [1]
Deputy Chairman of Works Council of
MVV Energie AG
(since 1 May 2022)

Susanne Schöttke [1]
State District Director, ver.di Nord

Bernhard Schumacher [1]
Head of Smart Cities Division at MVV Energie AG
(until 30 September 2022)

Dr. Stefan Seipl
Businessman, Independent Management Consultant

Christian Specht
First Mayor of City of Mannheim

Susanne Wenz [1]
Deputy State District Director, ver.di
Baden-Württemberg

Jürgen Wiesner [1]
Chairman of Works Council of MVV Energie AG
(until 30 April 2022)

Positions held by Executive and Supervisory Board members on supervisory boards or comparable supervisory bodies are listed in detail on the following pages.

1 Employee representative

MEMBERS OF SUPERVISORY BOARD COMMITTEES AT MVV ENERGIE AG

Committee	Name
Audit Committee	• Dr. Lorenz Näger (Chairman) • Heike Kamradt-Weidner (Deputy Chairwoman) • Angelo Bonelli • Detlef Falk • Martin F. Herrmann • Gregor Kurth
Personnel Committee	• Dr. Peter Kurz (Chairman) • Heike Kamradt-Weidner (Deputy Chairwoman) • Angelo Bonelli • Barbara Hoffmann • Gregor Kurth • Andreas Schöniger (since 2 June 2022) • Jürgen Wiesner (until 30 April 2022)
Nomination Committee	• Dr. Peter Kurz (Chairman) • Barbara Hoffmann • Gregor Kurth • Dr. Lorenz Näger • Tatjana Ratzel • Thorsten Riehle
Mediation Committee	• Dr. Peter Kurz (Chairman) • Heike Kamradt-Weidner • Gregor Kurth • Andreas Schöniger (since 2 June 2022) • Jürgen Wiesner (until 30 April 2022)
New Authorised Capital Creation Committee	• Dr. Peter Kurz (Chairman) • Heike Kamradt-Weidner • Gregor Kurth • Dr. Lorenz Näger • Tatjana Ratzel • Thorsten Riehle • Andres Schöniger (since 2 June 2022) • Christian Specht • Jürgen Wiesner (until 30 April 2022)

MEMBERS OF EXECUTIVE BOARD OF MVV ENERGIE AG

Name	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Dr. Georg Müller	• ABB AG, Mannheim • Energieversorgung Offenbach AG, Offenbach (Chairman) (until 28 February 2022) • Grosskraftwerk Mannheim AG, Mannheim • JUWI GmbH, Wörrstadt (Chairman) • MVV Insurance Services GmbH, Mannheim (Chairman) (until 15 August 2022) • Stadtwerke Kiel AG, Kiel (Chairman) (until 20 March 2022)	• MVV Enamic GmbH, Mannheim (Deputy Chairman) • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim
Verena Amann	• Energieversorgung Offenbach AG, Offenbach • JUWI GmbH, Wörrstadt • MVV Netze GmbH, Mannheim • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt • Stadtwerke Kiel AG, Kiel	• MVV Enamic GmbH, Mannheim
Daniela Kirchner (from 1 January 2022 to 30 September 2022)	• Energieversorgung Offenbach AG, Offenbach • JUWI GmbH, Wörrstadt	• MVV Energie CZ a.s., Prague, Czech Republic • MVV Trading GmbH, Mannheim • Stadtwerke Sinsheim Versorgungs GmbH & Co.KG, Sinsheim
Ralf Klöpfer	• Energieversorgung Offenbach AG, Offenbach • IDOS Software AG, Karlsruhe (until 31 October 2021) • JUWI GmbH, Wörrstadt • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt (Deputy Chairman) • Stadtwerke Kiel AG, Kiel (Chairman since 21 March 2022)	• MVV Enamic GmbH, Mannheim (Chairman) • MVV Energie CZ a.s., Prague, Czech Republic (Chairman) • MVV Trading GmbH, Mannheim (Chairman) • Qivalo GmbH, Mannheim (Chairman) • Stadtmarketing Mannheim GmbH, Mannheim
Dr. Hansjörg Roll	• Energieversorgung Offenbach AG, Offenbach (Chairman since 1 March 2022) • Grosskraftwerk Mannheim AG, Mannheim (Chairman) • JUWI GmbH, Wörrstadt (Deputy Chairman) • MVV Netze GmbH, Mannheim (Chairman) • Stadtwerke Kiel AG, Kiel	• MVV Energie CZ a.s., Prague, Czech Republic • MVV Umwelt GmbH, Mannheim (Chairman)

MEMBERS OF SUPERVISORY BOARD OF MVV ENERGIE AG

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Dr. Peter Kurz (Chairman) Lord High Mayor of City of Mannheim	• Universitätsklinikum Mannheim GmbH, Mannheim (Chairman)	• GBG Mannheimer Wohnungsbaugesellschaft mbH, Mannheim (Chairman) • mg: mannheimer gründungszentren gmbh, Mannheim (Chairman) • MKB Mannheimer Kommunalbeteiligungen GmbH, Mannheim (Chairman) • MWS Projektentwicklungsgesellschaft mbH, Mannheim (Chairman) • Sparkasse Rhein Neckar Nord, Mannheim (Chairman) • Stadtmarketing Mannheim GmbH, Mannheim (Chairman)
Heike Kamradt-Weidner (Deputy Chairwoman) Chairwoman of Group Works Council	• MVV Insurance Services GmbH, Mannheim (until 15 August 2022) • MVV Netze GmbH, Mannheim	• MVV Enamic GmbH, Mannheim • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim • Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel, (since 7 October 2022)
Johannes Böttcher Work Safety Specialist at Energieversorgung Offenbach AG (until 26 October 2022)	• Energieversorgung Offenbach AG, Offenbach (Deputy Chairman)	• Zusatzversorgungskasse Darmstadt, Darmstadt
Angelo Bonelli Trade Union Secretary at ver.di Baden-Württemberg State District	• TransnetBW GmbH, Stuttgart	
Timo Carstensen Deputy Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	
Sabine U. Dietrich Supervisory Board Member, Consultant	• Commerzbank AG, Frankfurt • H&R GmbH & Co. KGaA, Salzbergen	
Detlef Falk Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	• Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel
Martin F. Herrmann Business Angel, Mentor		• Česká pošta, s.p., Prague, Czech Republic (Chairman) (since 29 March 2022)
Barbara Hoffmann Auditor, Tax Advisor		• Berliner Stadtreinigungsbetriebe, Anstalt des öffentlichen Rechts, Berlin

Name Occupation	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Dr. Simon Kalvoda Head of Facility Management Division at MVV Energie AG (since 1 October 2022)		
Gregor Kurth Partner; Igneo Infrastructure Partners (Igneo), London, UK		• Utilitas Group, Estonia • Owlcastle Holdings Limited, UK
Thoralf Lingnau Member of Works Council of MVV Energie AG		• MVV Trading GmbH, Mannheim
Dr. Lorenz Näger Former Deputy Chairman of Executive Board and CFO of HeidelbergCement AG	• PHOENIX Pharma SE, Mannheim	• Blanc & Fischer Familienholding GmbH, Oberderdingen, Germany (since 1 May 2022) • PHOENIX Pharmahandel GmbH & Co. KG, Mannheim, Germany • PT Indocement Tunggal Prakarsa Tbk., Jakarta, Indonesia
Erik Niedenthal Chairman of Works Council of Energieversorgung Offenbach AG (since 27 October 2022)	• Energieversorgung Offenbach AG, Offenbach (Deputy Chairman since 3 November 2022)	• Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel
Tatjana Ratzel Lawyer, Head of Department at INTER Krankenversicherung AG Mannheim		
Thorsten Riehle Managing Director of Capitol-Betriebs GmbH Mannheim		• mg: mannheimer gründungszentren gmbH, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Andreas Schöniger Deputy Chairman of Works Council of MVV Energie AG (since 1 May 2022)	• MVV Insurance Services GmbH, Mannheim (until 15 August 2022)	• MVV Trading GmbH Mannheim (since 16 August 2022) • MVV Umwelt GmbH, Mannheim (since 18 August 2022)
Susanne Schöttke State District Director ver.di Nord	• Telekom Deutschland GmbH, Bonn (until 31 March 2022) • Deutsche Telekom AG, Bonn (since 7 April 2022)	
Bernhard Schumacher Head of Smart Cities Division at MVV Energie AG (until 30 September 2022)		• Management Stadtwerke Buchen GmbH, Buchen (Deputy Chairman) • Stadtwerke Schwetzingen Verwaltungsgesellschaft mbH, Schwetzingen • Stadtwerke Walldorf GmbH & Co. KG, Walldorf
Dr. Stefan Seipl Businessman, Independent Management Consultant	• Ferngas Netzgesellschaft mbH, Schwaig (Chairman) • Pfisterer Holding AG, Winterbach	• Nordion Energi AB, Malmö, Sweden

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Christian Specht First Mayor of City of Mannheim	• Rhein-Neckar-Verkehr GmbH, Mannheim (Chairman)	• MKB Mannheimer Kommunal-Beteiligungen GmbH, Mannheim (Deputy Chairman) • MV Verkehr GmbH, Mannheim (Chairman) • Verkehrsverbund Rhein-Neckar GmbH (VRN), Mannheim (Chairman)
Susanne Wenz Deputy State District Director, ver.di Baden-Württemberg		• PSD Bank Karlsruhe-Neustadt eG, Karlsruhe
Jürgen Wiesner Chairman of Works Council of MVV Energie AG (until 30 April 2022)	• MVV Enamic GmbH, Mannheim (until 15 December 2021) • MVV Trading GmbH, Mannheim (until 17 December 2021) • MVV Umwelt GmbH, Mannheim (until 13 April 2022)	• Soluvia IT-Services GmbH, Kiel (until 13 April 2022)

Independent Auditor’s Report

To MVV Energie AG, Mannheim

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Audit opinions

We have audited the consolidated financial statements of MVV Energie AG, Mannheim, and its subsidiaries (“the Group”), which comprise the consolidated balance sheet at 30 September 2022, the consolidated statement of comprehensive income, consolidated income statement, the consolidated statement of changes in equity and the consolidated cash flow statement for the financial year from 1 October 2021 to 30 September 2022, as well as the notes to the 2022 consolidated financial statements of MVV, which include a summary of significant accounting policies. In addition, we have audited the group management report of MVV Energie AG, which is combined with the company’s management report, for the financial year from 1 October 2021 to 30 September 2022. Consistent with German legal requirements, we have not audited the content of those parts of the group management report listed in the “Other information” section of our auditor’s report.

In our opinion, on the basis of the knowledge obtained in the audit

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group at 30 September 2022 and of its financial performance for the financial year from 1 October 2021 to 30 September 2022, and
- the accompanying group management report as a whole provides an appropriate view of the Group’s position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the “Other information” section of our auditor’s report.

Pursuant to § 322 Abs. 3 Satz [Sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the audit opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014; referred to subsequently as “EU Audit Regulation”) and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the “Auditor’s responsibilities for the audit of the consolidated financial statements and of the group management report” section of our auditor’s report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) letter (f) of the EU Audit Regulation, we declare that we have not provided any non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 October 2021 to 30 September 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

❶ Recoverability of goodwill
❷ Accounting treatment of energy trading transactions

Our presentation of these key audit matters has been structured in each case as follows:

① Matter and issue
② Audit approach and findings
③ Reference to further information

Hereinafter we present the key audit matters:

❶ Recoverability of goodwill

① Goodwill amounting in total to € 231 million is reported under the "Intangible assets" balance sheet item in the consolidated financial statements of MVV Energie AG. Goodwill is tested for impairment by the company once a year or when there are indications of impairment to determine any possible need for write-downs. The impairment test is carried out on the level of the groups of cash-generating units to which the relevant goodwill is allocated. The carrying amount of the relevant cash-generating units, including goodwill, is compared with the corresponding recoverable amount in the context of the impairment test. The recoverable amount is generally determined as the value in use. The present value of the future cash flows from the respective group of cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted medium-term business plan of the Group forms the starting point which is extrapolated based on assumptions about long-term rates of growth. Expectations relating to future market developments and assumptions about the development of macroeconomic factors are also taken into account. The discount rate used is the weighted average cost of capital for the respective group of cash-generating units. Based on the results of the regular impairment tests, no impairment losses were recognised in the current financial year.

The outcome of this valuation exercise is dependent to a large extent on the estimates made by the executive directors with respect to future cash flows at the respective group of cash-generating units, the discount rate used, the rate of growth and other assumptions, and is therefore subject to considerable uncertainty. In view of this, and given the complex nature of the valuation, this matter was of particular significance during our audit.

② As part of our audit, we assessed the methodology used for the purposes of performing the impairment test, among other aspects. Having compared the future cash flows used for the calculation with the medium-term business plan adopted by the Group, we assessed the appropriateness of the calculation, in particular by reconciling it with general and sector-specific market expectations. In addition, we assessed the appropriate consideration of the costs of Group functions. Aware that even relatively minor changes in the discount rate applied can have a material impact on the value of the entity calculated in this way, we also focused our testing on the parameters used to determine the discount rate applied and assessed the calculation model. To reflect the uncertainty inherent in the projections, we evaluated the sensitivity analyses performed by the company. Overall, the valuation parameters and assumptions used by the executive directors are in line with our expectations and also within the ranges we consider reasonable.

③ The company's goodwill disclosures are contained in note "14 Intangible assets" of the notes to MVV's 2022 consolidated financial statements.

❷ Accounting treatment of energy trading transactions

① Within the MVV Energie AG Group, the consolidated subsidiary MVV Trading GmbH has primary responsibility for the procurement of energy and emission rights and for hedging energy price risks for the group companies MVV Energie AG, Stadtwerke Kiel AG, Energieversorgung Offenbach AG and Stadtwerke Ingolstadt GmbH. To this end, MVV Trading GmbH trades on the spot and futures markets, mainly for electricity, gas and emissions rights on energy exchanges and the over-the-counter market. The hedging measures take due account of factors such as the expected implications of the war in Ukraine. The contracts thereby concluded constitute derivative instruments in accordance with IFRS 9; these are accounted for either at fair value through profit or loss (classified as financial assets or liabilities measured at fair value through profit or loss) or as pending transactions if the underlying for the derivative financial instrument will be received or delivered in future as part of the company's own expected purchase, sale or use requirements ("own use exemption"). The accounting treatment for physically settled derivative financial instruments is determined with the aid of the risk management system of MVV Trading GmbH, which allocates these derivative financial instruments to their corresponding purpose and therefore to the appropriate accounting treatment from a group perspective. Accordingly, physically settled derivative financial instruments that do not form part of the Group's own expected purchase, sale or use requirements and all financially settled derivative financial instruments are measured at fair value through profit or loss. These derivative financial instruments for electricity, gas and emission rights are in some cases included as hedging instruments in IFRS 9 hedge accounting, in this case as cash flow hedges. The underlying transactions are the purchase and sale of electricity, gas and emission rights at variable prices within a maximum of five years. The energy trading operations are supported by energy trading systems. These handle the process chain from the recording of trading transactions to the calculation and measurement of positions and the confirmation of trading transactions, as well as risk management.

Given the high trading volumes, the complexity of accounting for derivatives in accordance with IFRS 9 and IFRS 13, the increased uncertainty due to the expected implications of the war in Ukraine and the significant effects on the assets, liabilities, financial position and financial performance, this business area is of particular significance for the consolidated financial statements and the conduct of our audit.

② One aspect of our audit involved assessing the appropriateness of the internal control system established for the purpose of entering into and settling energy trading transactions, including the trading systems used to this end. As part of our audit of the internal control system, we also evaluated the effectiveness of the controls established by the company on a sample basis. We analysed the methodology for determining the fair values of the derivative financial instruments with respect to IFRS 13 compliance and conducted an appraisal using our own valuations on a sample basis. With respect to the accounting treatment of the derivatives in accordance with IFRS 9, we evaluated the application of the own use exemption for physically settled derivative financial instruments using the process implemented within the Group – from the submission of orders by the consolidated subsidiaries to MVV Trading GmbH to the processing of data by MVV Trading GmbH – and satisfied ourselves that the own use exemption is applied correctly on the basis of a random sample. We assessed the recognition of cash flow hedges and their accounting. Among other aspects, we evaluated the process used to assess the necessary effectiveness of the cash flow hedges and the correctness of the corresponding amounts recognised in equity and of the reclassified amounts within the consolidated income statement, as well as the expected implications of the war in Ukraine. In our view, the accounting policies applied by the executive directors and the methodology for accounting for energy trading transactions are appropriate overall.

③ The company's disclosures relating to energy trading and its effects on the consolidated financial statements are contained in note "36 Financial instruments" in the notes to MVV's 2022 consolidated financial statements.

Other information

- The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the corporate governance declaration pursuant to § 289f HGB and § 315d HGB included in the "Corporate Governance Declaration" section of the group management report

- the non-financial declaration contained in the "Combined Non-Financial Declaration" section of the group management report pursuant to § 289b Abs. 1 HGB and § 315b Abs. 1 HGB

The other information further comprises:

- the remuneration report pursuant to § 162 AktG, for which the supervisory board is additionally responsible

- all remaining parts of the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information listed above and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the audited contents of the group management report or our knowledge obtained in the audit, or

- otherwise appears to be materially misstated.

Responsibilities of the executive directors and the supervisory board for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal controls as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangement and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional scepticism throughout the audit. We also

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group’s position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicated with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor’s report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND OTHER REGULATORY REQUIREMENTS

Report on the assurance review of the electronic reproductions of the consolidated financial statements and of the group management report prepared for disclosure purposes in accordance with § 317 Abs. 3a HGB

Audit opinion
In accordance with § 317 Abs. 3a HGB, we have performed a reasonable assurance review to determine whether the reproductions of the consolidated financial statements and of the group management report contained in the file “MVV_AG_KA_KLB.zip” (hereinafter also referred to as “ESEF documents”) and prepared for disclosure purposes comply in all material respects with the electronic reporting format requirements of § 328 Abs. 1 HGB (“ESEF format”). In accordance with German legal requirements, this audit extends only to the conversion of the information contained in the consolidated financial statements and the group management report into ESEF format and therefore neither to the information contained in these reproductions nor to any other information contained in the above-mentioned file.

In our opinion, the reproductions of the consolidated financial statements and of the group management report contained in the above-mentioned file and prepared for disclosure purposes comply, in all material respects, with the electronic reporting format requirements of § 328 Abs. 1 HGB. Other than this opinion and our opinions on the accompanying group management report for the financial year from 1 October 2021 to 30 September 2022 included in the “Report on the audit of the consolidated financial statements and of the group management report” above, we do not express any opinion on the information included in these reproductions or on any of the other information included in the above-mentioned file.

Basis for the reasonable assurance conclusion
We conducted our assurance review of the reproduction of the consolidated financial statements and of the group management report contained in the above-mentioned electronic file in accordance with § 317 Abs. 3a HGB, taking due account of the IDW Assurance Standard: Audit for the Purpose of Disclosure of Electronic Reproductions pursuant to § 317 Abs. 3a HGB (IDW AsS 410 (10.2021)) and of the International Standard on Assurance Engagements 3000 (Revised). Accordingly, our responsibilities are further described under "Group auditor's responsibilities for the assurance review of the ESEF documents". Our audit firm has applied the quality assurance system requirements of the IDW Standard for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of executive directors and supervisory board for the ESEF documents
The executive directors of the company are responsible for the preparation of the ESEF documents including the electronic reproduction of the consolidated financial statements and the group management report in accordance with § 328 Abs. 1 Sentence 4 Nr. [Number] 1 HGB and for tagging the consolidated financial statements in accordance with § 328 Abs. 1 Satz 4 Nr. 2 HGB.

In addition, the executive directors of the company are responsible for such internal controls as they have considered necessary to enable the preparation of ESEF documents free from material non-compliance with the requirements of § 328 Abs. 1 HGB for the electronic reporting format, whether due to fraud or error.

The supervisory board is responsible for overseeing the preparation of the ESEF documents as part of the financial reporting process.

Group auditor's responsibilities for the assurance review of the ESEF documents
Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error. We exercise professional judgment and maintain professional scepticism throughout the assurance review. We also:

- Identify and assess the risks of material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance conclusion.

- Obtain an understanding of the internal control relevant to the assurance engagement on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance conclusion on the effectiveness of these controls.

- Evaluate the technical validity of the ESEF documents, i.e. whether the file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815 in the version applicable as of the balance sheet date on the technical specification for this electronic file.

- Evaluate whether the ESEF documents enable an XHTML reproduction with content equivalent to the audited consolidated financial statements and the audited group management report.

- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) pursuant to Articles 4 and 6 of the Delegated Regulation (EU) 2019/815 in the version applicable as of the balance sheet date enables an appropriate and complete machine-readable XBRL copy of the XHTML reproduction.

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 11 March 2022. We were engaged by the supervisory board on 10 May 2022. We have been the group auditor of MVV Energie AG, Mannheim, without interruption since the 2008/2009 financial year.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

REFERENCE TO A FURTHER MATTER – UTILISATION OF AUDITOR'S REPORT

Our auditor's report should always be read in conjunction with the audited consolidated financial statements and the audited group management report, as well as the audited ESEF documents. The consolidated financial statements and group management report converted into ESEF format – also in the versions to be published in the Federal Official Gazette (Bundesanzeiger) – are merely electronic reproductions of the audited consolidated financial statements and the audited group management report and do not substitute for such. In particular, the "Report on the assurance review of the electronic reproductions of the consolidated financial statements and of the group management report prepared for disclosure purposes in accordance with § 317 Abs. 3a HGB" and the reasonable assurance opinion contained therein may only be utilised in conjunction with the audited ESEF documents made available in electronic form.

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Andrea Ehrenmann.

Essen, 14 November 2022

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

Ralph Welter	Andrea Ehrenmann
Wirtschaftsprüfer [German Public Auditor]	Wirtschaftsprüferin [German Public Auditor]

Remuneration Report

In what follows, the Executive and Supervisory Boards report pursuant to § 162 of the German Stock Corporation Act (AktG) on the remuneration of the Executive and Supervisory Boards of MVV Energie AG in the 2022 financial year. The remuneration systems for the Executive and Supervisory Boards of MVV Energie AG were approved by the Annual General Meeting on 12 March 2021. The resolutions have been published on our website **www.mvv.de/corporate-governance.**

Remuneration of Executive Board Members

Executive Board remuneration system

On 2 December 2020, the Supervisory Board adopted a remuneration system for the Executive Board pursuant to § 87a (1) AktG. This remuneration system was approved by the Annual General Meeting pursuant to § 120a (1) AktG on 12 March 2021 and has since been applied.

Pursuant to § 87a (2) Sentence 1 AktG, the Supervisory Board is required to determine the remuneration of Executive Board members in accordance with the remuneration system submitted to the Annual General Meeting for approval pursuant to § 120a (1) AktG. This also occurred on 12 March 2021. Should we make any material changes to the remuneration system, we will submit these for renewed approval by the Annual General Meeting. Irrespective of any changes, § 120 (1) Sentence 1 AktG requires the Annual General Meeting to renew its approval every four years.

The Executive Board remuneration system is aligned to our corporate strategy and our business model. As is customary in the energy sector, our investments are characterised by a long-term horizon. Furthermore, we operate in a highly dynamic market and political climate. The Executive Board remuneration system takes account of this framework. It on the one hand incentivises the long-term and sustainable development in the company and its value while on the other hand rewarding financial success. The company's long-term alignment is particularly reflected in variable remuneration, the predominant share of which is based on a three-year period. The remuneration system is thus consistent with the development in the remuneration of employees who are covered by the company collective agreement for MVV Energie AG. Reference is made to the same key financial figures when assessing the variable remuneration for this group of employees and for the Executive Board.

All matters pertaining to the Executive Board are prepared in the Supervisory Board Personnel Committee and decided by the full Supervisory Board. These also include matters pertaining to the remuneration of Executive Board members, the Executive Board remuneration system and preparations for the appointment of new Executive Board members. In the year under report, Daniela Kirchner was proposed as a further deputy Executive Board member and appointed by the Supervisory Board. The Personnel Committee comprises six members and is convened when required.

In this report, we present the total remuneration granted and owed to the Executive Board members in the 2022 financial year, even if variable remuneration is regularly disbursed only after the end of the respective financial year. We view remuneration as having been granted when the underlying work has been performed in full.

Executive Board remuneration comprises non-performance-related and performance-related components, the composition and determination of which is described below. No other payments were either committed or made by third parties to Executive Board members in connection with their activities as such.

The amount of individual Executive Board remuneration is based on and consistent with the recommendations made by market studies and benchmarks. With the assistance of an independent advisory company, the Supervisory Board reviewed the appropriateness of all components of remuneration in terms of their design, amount and structure in the 2019 financial year and established that these were appropriate. On the one hand, this review was horizontal, i.e. referred to the market by means of a cross-industry comparison in which we analysed 25 companies in the M-DAX and S-DAX indices. Furthermore, we analysed the remuneration at 14 energy suppliers, including companies in the DAX index and regional energy suppliers. On the other hand, we performed a vertical review on the appropriateness of remuneration. This confirmed that the relationship between the remuneration of the Chief Executive Officer and that of ordinary Executive Board members was appropriate, as was that to the remuneration of other employees and of heads of departments and authorised representatives.

The management system for the MVV Group (“MVV”) is based on financial and non-financial key figures. Both sets of figures are regularly and transparently communicated, both within the company and externally, including in MVV’s Annual Report. This management system is resilient and well balanced. It is summarised in the return on capital employed (ROCE), which is the main key figure for MVV’s sustainable development, particularly also in the context of variable remuneration. This way, we ensure that all Executive Board members are similarly working to achieve the same targets for the company.

The Executive Board remuneration system provides for a cap on severance pay. Payments to a retiring member of the Executive Board may not exceed the amount of two annual remuneration packages. Moreover, no remuneration may be made for periods exceeding the remaining term of the employment contract. No transitional allowance is granted in the event of the premature termination or non-extension of the employment contract.

The maximum remuneration stipulated by the Supervisory Board for Executive Board members covers fixed remuneration, contractually agreed maximum variable remuneration, fringe benefits, pension commitments and remuneration for supervisory board positions held within the Group. This involves the maximum arithmetically possible remuneration; as a general rule, this is not achieved as the Supervisory Board determines new minimum thresholds for variable remuneration each year taking due account of the company’s business performance. Maximum remuneration amounts to Euro 2.46 million for the Chief Executive Officer and Euro 1.49 million for the other Executive Board members. In the year under report, the corresponding internal figures amounted to Euro 1.67 million for the Chief Executive Officer and between Euro 0.53 million and Euro 1.19 million for the other Executive Board members.

Non-performance-related remuneration

The non-performance-related remuneration components paid to Executive Board members comprise a fixed salary, fringe benefits and pension commitments. The fixed remuneration is paid in prorated instalments in the form of a monthly salary. Furthermore, Executive Board members receive fringe benefits. These mainly involve contributions to insurance policies customary to the market and non-cash benefits in kind resulting from company car use. The Executive Board members are required to tax the fringe benefits under their own individual responsibility.

Individual fixed remuneration packages are reviewed every two years. Potential adjustments to fixed remuneration are regularly based on the development in collectively agreed pay for those employees who are covered by the company collective agreement at MVV Energie AG. This ensures commensurable developments in remuneration between Executive Board members and the company’s workforce. A structural analysis performed with expert support to assess Executive Board salaries compared with the remuneration paid to employees has confirmed that these salaries conform to market norms.

Performance-related remuneration

The variable remuneration of the Executive Board members comprises the annual bonus and sustainability bonuses 1 and 2, each of which is furnished with appropriate minimum thresholds and caps. The relationship between the total bonus and the business performance offers guidance for the setting of threshold values. The minimum thresholds are determined each year by the Supervisory Board. It is ensured that decisions taken by the Executive Board to safeguard the company's long-term success do not contravene the development in the total bonus.

The annual bonus is based on the adjusted EBIT achieved by MVV in the respective past financial year. To determine this key figure relevant to the company's management, we eliminate the following items from operating earnings before interest and taxes: positive and negative earnings items resulting from fair value measurement as of the reporting date of financial derivatives recognised under IFRS 9, the effects of structural adjustments due to part-time early retirement and, if applicable, restructuring expenses. We add interest income from finance leases, which is reported in financing income in the income statement, to adjusted EBIT. To calculate the annual bonus, adjusted EBIT is amended to account for the effects of changes in shareholdings and the market (bonus-relevant adjusted EBIT).

Sustainability bonuses 1 and 2 are linked to the long-term increase in the company's value and based on the ROCE and WACC key figures. The ROCE figure measures how efficiently the company has used its capital employed. As the capital required for operations is influenced above all by long-term strategic decisions, this key figure is well suited to assess the long-term development in the company and its value. The bonus-relevant ROCE figure is calculated by dividing bonus-relevant adjusted EBIT by capital employed. The costs of capital are expressed in the WACC figure. The parameters used to calculate WACC relevant to MVV are reviewed each year and partly updated to account for changes in the market. For the 2022 financial year, the cost of equity after taxes was calculated at 6.9 %, while the cost of debt after taxes stood at 1.1 %. For MVV's peer group, the capital structure comprises 59.8 % equity and 40.2 % debt capital. The Group tax rate amounts to 30 %. The WACC calculated on the basis of this data amounted to 4.6 % after taxes and 6.6 % before taxes in the 2022 financial year. Sustainability bonus 1 is paid if bonus-relevant ROCE exceeds the minimum return specified by the Supervisory Board each year over a three-year period. Sustainability bonus 2 is granted if bonus-relevant ROCE (as an average for the past three years) exceeds the costs of capital (also as an average for the past three years).

The key figures relevant to the payment of performance-related remuneration are presented in the following table.

Key figures relevant to payment of performance-related Executive Board remuneration to Executive Board members

	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018
Annual bonus					
Bonus-relevant adjusted EBIT (Euro million)	298	255	226	–	–
Sustainability bonus					
Bonus-relevant ROCE before taxes (%)	8.9	8.2	7.5	7.9	8.5
Average bonus-relevant ROCE before taxes over three financial years (%)	8.2	7.9	8.0	–	–
WACC before taxes (%)	6.6	5.9	6.0	6.3	6.3
Average WACC before taxes over three financial years (%)	6.2	6.1	6.2	–	–

Executive Board members receive a contractually agreed amount both for the annual component and for the two sustainability components if the relevant key figures exceed the respective threshold values. For the annual component, such claims arise for each full one-million-euro amount by which the key figure exceeds the minimum threshold; for sustainability bonus 1, the claim arises for each whole per mil by which the minimum yield is exceeded; for sustainability bonus 2, such claim arises for each whole per mil by which the WACC key figure is exceeded. In the past financial year, the predetermined minimum threshold, minimum return and WACC were exceeded, giving rise to a claim to variable remuneration. Compared with the annual bonus, the sustainability bonuses account for the overwhelming share of variable remuneration for the Executive Board members of MVV Energie AG. No further multiyear variable remuneration is provided for, neither does the company maintain any stock option programmes or comparable instruments. The shareholder structure of MVV Energie AG weighs against offering variable remuneration in company shares or other share-based remuneration models; in particular, the low level of free float means there are only limited possibilities to participate in growth in the company's value via its shares. The remuneration system also entitles the Supervisory Board to increase or reduce individual claims to variable remuneration by up to 5 % on the basis of non-financial key figures. To date, the Supervisory Board has not drawn on this option. The clawback of remuneration components is not provided for.

Retirement pension

In addition, Executive Board members at MVV Energie AG have been granted defined contribution pension commitments, the volume of which corresponds to the balances on virtual pension accounts at the time at which the benefits are claimed. Pension contributions bearing annual interest are credited to these accounts each year. The commitments also cover benefits for permanent inability to work and provision for surviving dependants. Daniela Kirchner opted to remain with her existing pension provider, namely the municipal supplementary pension company (ZVK) of the Baden-Württemberg municipal pension association. In her case, the general allocation of 5.75 % of pensionable income plus additional contributions provided for by the articles and restructuring funds, amounting to Euro 14.8 thousand in total, were deducted.

Executive Board remuneration in 2022 financial year

The total remuneration granted and owed to the current members of the Executive Board in the year under report was structured as follows:

Total remuneration granted and owed to current Executive Board members

	Dr. Georg Müller, Chief Executive Officer				Verena Amann, Personnel Director			
	FY 2022		FY 2021		FY 2022		FY 2021	
	Euro 000s	% share of total remuneration	Euro 000s	% share of total remuneration	Euro 000s	% share of total remuneration	Euro 000s	% share of total remuneration
Fixed salary [1]	501	52	547	52	327	48	327	47
Fringe benefits [2]	20	2	27	3	40	6	40	6
Other remuneration [3]	5	1	11	1	9	1	9	1
Non-performance-related remuneration	**526**	**55**	**585**	**55**	**376**	**55**	**376**	**54**
Performance-related remuneration	435	45	474	45	311	45	314	46
Total remuneration	**961**	**100**	**1,059**	**100**	**687**	**100**	**690**	**100**

	Daniela Kirchner, Commercial Director (from 1 January 2022 to 30 September 2022)				Ralf Klöpfer, Sales Director			
	FY 2022		FY 2021		FY 2022		FY 2021	
	Euro 000s	% share of total remuneration	Euro 000s	% share of total remuneration	Euro 000s	% share of total remuneration	Euro 000s	% share of total remuneration
Fixed salary [1]	245	48	–	–	327	48	327	47
Fringe benefits [2]	24	5	–	–	37	5	38	6
Other remuneration [3]	2	0	–	–	13	2	11	2
Non-performance-related remuneration	**271**	**53**	**–**	**–**	**377**	**55**	**376**	**55**
Performance-related remuneration	240	47	–	–	307	45	313	45
Total remuneration	**511**	**100**	**–**	**–**	**684**	**100**	**689**	**100**

	Dr. Hansjörg Roll, Technology Director			
	FY 2022		FY 2021	
	Euro 000s	% share of total remuneration	Euro 000s	% share of total remuneration
Fixed salary [1]	327	43	327	49
Fringe benefits [2]	20	2	20	3
Other remuneration [3, 4]	107	14	6	1
Non-performance-related remuneration	**454**	**58**	**353**	**53**
Performance-related remuneration	313	41	318	47
Total remuneration	**767**	**100**	**671**	**100**

1 Annual fixed remuneration including CEO allowance of Euro 202 thousand for Dr. Georg Müller

2 Contributions to health insurance, nursing care insurance, voluntary contributions to employers' mutual insurance association, non-cash benefits/benefits in kind

3 Remuneration from board activity at subsidiaries and shareholdings (entitlement in respective financial year). This is deducted from variable remuneration.

4 As well as remuneration of Euro 7 thousand for board activity, this figure includes a special payment of Euro 100 thousand

Remuneration received for supervisory board positions within the Group (other remuneration) is imputed each year to performance-related remuneration and has been deducted.

Dr. Hansjörg Roll received a one-off special payment that was decided on after the annual and consolidated financial statements had been prepared by the Executive Board and approved by the Supervisory Board.

Benefits payable in the event of regular termination of activity (pension obligations pursuant to IFRS)

			Development in virtual pension accounts	Pension provisions		Allocation to pension provisions
Euro 000s	Balance at 1 Oct 2021	Pension contribution	**Balance at 30 Sep 2022** [1]	**Balance at 30 Sep 2022** [2]	Service cost	Interest expenses
Dr. Georg Müller	3,914	369	4,456	4,711	712	63
Verena Amann	230	105	345	374	289	6
Ralf Klöpfer	1,221	187	1,457	1,496	367	21
Dr. Hansjörg Roll	1,196	220	1,463	1,516	424	21
Total	**6,561**	**881** [3]	**7,721**	**8,097**	**1,792**	**111**

1 Including interest

2 Equivalent to present value of vested claims

3 Daniela Kirchner opted to remain in her existing pension system. Contributions of Euro 14.8 thousand were transferred on her behalf, as a result of which the pension contribution for Executive Board members amounted to Euro 896 thousand in total.

Due to the illness and resultant absence of the Chief Executive Officer, the fixed salary and performance-related remuneration of Dr. Georg Müller were paid on a time-apportioned basis in line with the respective contractual provisions in the 2022 financial year. His responsibilities were temporarily assigned to the other Executive Board members. Daniela Kirchner, previously head of the accounting and tax division, was appointed as a deputy member of the Executive Board for the period in which Dr. Georg Müller was unable to perform his duties and was temporarily assigned responsibility for commercial affairs. She remained in her existing pension system and, upon benefits becoming due, is entitled to benefits from the municipal supplementary pension company (ZVK) of the Baden-Württemberg municipal pension association. No pension obligations are therefore owed to her. To account for the current situation, both the performance-related and the non-performance-related components of her remuneration were amended on an individual basis.

Remuneration of Supervisory Board Members

Supervisory Board remuneration system

Pursuant to § 15 of the Articles of Association of MVV Energie AG, remuneration paid to members of the Supervisory Board is determined by the Annual General Meeting; this was most recently determined by resolution of the Annual General Meeting on 13 March 2020.

According to § 113 (3) AktG, the annual general meetings of listed companies are required to adopt a resolution concerning the remuneration system for their supervisory board members at least every four years. The remuneration system was approved by the Annual General Meeting on 12 March 2021. The Articles of Association and remuneration system are published on our website
www.mvv.de/corporate-governance.

In this report, we present the total remuneration granted and owed to Supervisory Board members in the 2022 financial year. We view this remuneration as having been granted as the underlying work has been performed in full. In accordance with the Articles of Association, Supervisory Board members receive fixed annual remuneration payable after the conclusion of the financial year. This annual remuneration takes the form of fixed remuneration. The amount of remuneration takes due account of the responsibility and scope of activities of the Supervisory Board members. Additional remuneration is paid to the Chair and Deputy Chair of the Supervisory Board and to the Chair and members of the Audit Committee. Annual remuneration was most recently adjusted in the 2020 financial year.

In addition, Supervisory Board members receive a meeting allowance for each meeting of the full Supervisory Board or committee meeting attended. This is also paid to members attending the Audit Committee as permanent guests. The Supervisory Board Chair and the Audit Committee Chair receive twice the amount to remunerate their additional tasks in chairing meetings and in preparing and following up on the meetings of the Supervisory Board and the Audit Committee. The meeting allowance was most recently adjusted in 2009.

Supervisory Board members are reimbursed for outlays arising in connection with the discharging of their duties, as well as for any valued added tax incurred on the remuneration. An assistant is also provided to support the Supervisory Board Chair in discharging his duties.

Fixed remuneration, remuneration of additional committee activities, meeting allowances and the decision not to offer performance-related remuneration are intended in particular to underline the independence of Supervisory Board members. Enabling the Supervisory Board to perform its supervisory and advisory activities appropriately and independently of the company's financial results, thus underlining the independence and competence of Supervisory Board members, mean that, in performing its supervisory and advisory activities, the Supervisory Board is able to focus on the company's long-term and solid development.

Supervisory Board remuneration in 2022 financial year

In addition to the reimbursement of their outlays, the Supervisory Board members received annual remuneration of Euro 15,000. The Supervisory Board Chairman received annual remuneration of Euro 30,000 while the Deputy Chairwoman received Euro 22,500.

The Audit Committee Chairman received additional annual remuneration of Euro 10,000, while the other members of this committee each received Euro 5,000.

Members joining or retiring from the Supervisory Board or a committee during the financial year received time-apportioned remuneration.

Furthermore, members of the Supervisory Board and its committees received a meeting allowance of Euro 1,000 for each meeting attended, while the Chairmen of the Supervisory Board and the Audit Committee each received twice this amount for each meeting attended.

The Supervisory Board members did not receive any further remuneration or benefits in the year under report for services provided in a personal capacity, such as advisory or mediation services. No loans or advances were granted to Supervisory Board members and the company did not assume any liability on their behalf.

The following table presents the remuneration components granted and owed to current and former Supervisory Board members in the past financial year, including the respective relative share pursuant to § 162 (1) Sentence 1 AktG.

Remuneration granted and owed to current and former Supervisory Board members in 2022 financial year

	Fixed remuneration		Fixed remuneration for committee activity		Meeting allowances		Total remuner-ation	Previous year
	Euro	% share of total remuner-ation	Euro	% share of total remuner-ation	Euro	% share of total remuner-ation	Euro	Euro
Current Supervisory Board members								
Dr. Peter Kurz, Chairman	30,000	59	–	–	21,000	41	51,000	49,000
Johannes Böttcher	15,000	68	–	–	7,000	32	22,000	21,000
Angelo Bonelli	15,000	44	5,000	15	14,000	41	34,000	19,055
Timo Carstensen	15,000	68	–	–	7,000	32	22,000	21,000
Sabine U. Dietrich	15,000	71	–	–	6,000	29	21,000	20,000
Detlef Falk	15,000	50	5,000	17	10,000	33	30,000	31,000
Martin F. Herrmann	15,000	47	5,000	16	12,000	38	32,000	17,055
Barbara Hoffmann	15,000	58	–	–	11,000	42	26,000	24,000
Heike Kamradt-Weidner	22,500	52	5,000	11	16,000	37	43,500	41,500
Gregor Kurth	15,000	42	5,000	14	16,000	44	36,000	32,000
Thoralf Lingnau	15,000	68	–	–	7,000	32	22,000	21,000
Dr. Lorenz Näger	15,000	36	10,000	24	17,000	40	42,000	36,764
Tatjana Ratzel	15,000	68	–	–	7,000	32	22,000	22,000
Thorsten Riehle	15,000	68	–	–	7,000	32	22,000	11,292
Andreas Schöniger (since 1 May 2022)	6,250	61	–	–	4,000	39	10,250	–
Susanne Schöttke	15,000	68	–	–	7,000	32	22,000	10,292
Bernhard Schumacher (until 30 September 2022)	15,000	68	–	–	7,000	32	22,000	21,000
Dr. Stefan Seipl	15,000	56	–	–	12,000	44	27,000	26,000
Christian Specht	15,000	56	–	–	12,000	44	27,000	26,000
Susanne Wenz	15,000	94	–	–	1,000	6	16,000	19,000
Total	**313,750**		**35,000**		**201,000**		**549,750**	**468,958**
Former Supervisory Board members								
Jürgen Wiesner (until 30 April 2022)	8,750	56	–	–	7,000	44	15,750	23,000
Ralf Eisenhauer (until 12 March 2021)								11,750
Peter Erni (until 12 March 2021)								9,000
Gabriele Gröschl-Bahr (until 12 March 2021)								8,750
Prof. Heinz-Werner Ufer (until 12 March 2021)								19,250
Total	**8,750**		**–**		**7,000**		**15,750**	**71,750**
Total remuneration for current and former Supervisory Board members	**322,500**		**35,000**		**208,000**		**565,500**	**540,708**

Comparative Presentation

In the tables below, we report on the annual change in remuneration granted and owed to the Executive Board and in the remuneration of current and former Supervisory Board members. Moreover, to facilitate comparison we present the development in the company's earnings and in the remuneration of its employees on a full-time equivalent basis. To present the development in the company's earnings, we on the one hand report the adjusted EBIT of the MVV Group ("MVV") pursuant to IFRS and on the other hand present the annual net surplus of the group parent company MVV Energie AG pursuant to HGB. Both are key management figures for the company.

To report on the remuneration of employees, we present the average wages and salaries of employees of MVV Energie AG in the respective financial year. The components of remuneration have been selected to correspond with the total remuneration of the Executive Board. They comprise monthly remuneration pursuant to the relevant tables, fixed allowances, one-off payments, variable remuneration and any benefits in kind arising from the use of company cars.

The Executive Board remuneration presented below (total remuneration granted and owed) corresponds to the "total remuneration" published in previous financial years.

Comparative presentation of Executive Board remuneration, Supervisory Board remuneration, development in earnings and employee remuneration

Comparative presentation of total remuneration granted and owed to current Executive Board members over the past five financial years

Euro 000s	**FY 2022**	FY 2021	% change FY 2022 on FY 2021	FY 2020	% change FY 2021 on FY 2020	FY 2019	% change FY 2020 on FY 2019	FY 2018	% change FY 2019 on FY 2018	FY 2017	% change FY 2018 on FY 2017
Executive Board remuneration											
Dr. Georg Müller Chief Executive Officer	961	1,059	– 9	960	+ 10	1,015	– 5	945	+ 7	994	– 5
Verena Amann Personnel Director (since 1 August 2019)	687	690	0	624	+ 11	107	>+100	–	–	–	–
Daniela Kirchner Commercial Affairs (from 1 January 2022 to 30 September 2022)	511	–	–	–	–	–	–	–	–	–	–
Ralf Klöpfer Sales Director	684	689	– 1	622	+ 11	666	– 7	647	+ 3	678	– 5
Dr. Hansjörg Roll Technology Director	767	671	+ 14	606	+ 11	651	– 7	617	+ 6	646	– 4

Comparative presentation of total remuneration granted and owed to Supervisory Board members over past financial years

Euro	**FY 2022**	FY 2021	% change FY 2022 on FY 2021	FY 2020	% change FY 2021 on FY 2020	FY 2019	% change FY 2020 on FY 2019	FY 2018	% change FY 2019 on FY 2018	FY2017	% change FY 2018 on FY 2017
Current Supervisory Board members											
Dr. Peter Kurz, Chairman	51,000	49,000	+ 4	48,000	+ 2	39,000	+ 23	36,000	+ 8	20,000	+ 80
Johannes Böttcher	22,000	21,000	+ 5	22,000	– 5	16,000	+ 38	15,000	+ 7	10,000	+ 50
Angelo Bonelli	34,000	19,055	+ 78	–	–	–	–	–	–	–	–
Timo Carstensen	22,000	21,000	+ 5	20,000	+ 5	16,000	+ 25	15,000	+ 7	10,000	+ 50
Sabine U. Dietrich	21,000	20,000	+ 5	–	–	–	–	–	–	–	–
Detlef Falk	30,000	31,000	– 3	30,000	+ 3	21,500	+ 40	25,500	– 16	12,500	>+100
Martin F. Herrmann	32,000	17,055	+ 88	–	–	–	–	–	–	–	–
Barbara Hoffmann	26,000	24,000	+ 8	21,000	+ 14	15,000	+ 40	16,000	– 6	10,000	+ 60
Heike Kamradt-Weidner	43,500	41,500	+ 5	41,500	–	32,500	+ 28	34,500	– 6	13,479	>+100
Gregor Kurth	36,000	32,000	+ 13	7,667	>+100	–	–	–	–	–	–
Thoralf Lingnau	22,000	21,000	+ 5	14,292	+ 47	–	–	–	–	–	–
Dr. Lorenz Näger	42,000	36,764	+ 14	31,000	+ 19	19,500	+ 59	23,500	– 17	12,500	+ 88
Tatjana Ratzel	22,000	22,000	–	–	–	–	–	–	–	–	–
Thorsten Riehle	22,000	11,292	+ 95	–	–	–	–	–	–	–	–
Andreas Schöniger (since 1 May 2022)	10,250	–	–	–	–	–	–	–	–	–	–
Susanne Schöttke	22,000	10,292	>+100	–	–	–	–	–	–	–	–
Bernhard Schumacher (until 30 September 2022)	22,000	21,000	+ 5	22,000	– 5	16,000	+ 38	15,000	+ 7	10,000	+ 50
Dr. Stefan Seipl	27,000	26,000	+ 4	–	–	–	–	–	–	–	–
Christian Specht	27,000	26,000	+ 4	30,000	– 13	18,875	+ 59	14,000	+ 35	10,000	+ 40
Susanne Wenz	16,000	19,000	– 16	20,000	– 5	3,222	>+100	–	–	–	–
Former Supervisory Board members											
Jürgen Wiesner (until 30 April 2022)	15,750	23,000	– 32	24,000	– 4	20,000	+ 20	16,000	+ 25	10,000	+ 60

Comparative presentation of development in earnings and employee remuneration over past five financial years

	FY 2022	FY 2021	% change FY 2022 on FY 2021	FY 2020	% change FY 2021 on FY 2020	FY 2019	% change FY 2020 on FY 2019	FY 2018	% change FY 2019 on FY 2018	FY 2017	% change FY 2018 on FY 2017
Development in earnings											
Adjusted EBIT (Euro million)	353	278	+ 27	233	+ 19	225	+ 4	228	– 1	224	+ 2
Annual net surplus of MVV Energie AG (Euro million)	117	111	+ 5	99	+ 12	99	0	114	– 13	92	+ 24
Average employee remuneration											
MVV Energie AG (Euro)	95,833	94,069	+ 2	91,162	+ 3	88,959	+ 2	88,843	0	86,786	+ 2

Independent Auditor's Report

REPORT OF THE INDEPENDENT AUDITOR ON THE AUDIT OF THE REMUNERATION REPORT PURSUANT TO § 162 ABS. 3 AKTG

To MVV Energie AG, Mannheim

Audit opinion

We have audited the remuneration report of MVV Energie AG, Mannheim, for the financial year from 1 October 2021 to 30 September 2022 to ascertain in formal terms whether the disclosures required by § [Article] 162 Abs. [paragraph] 1 and 2 AktG [Aktiengesetz: German Stock Corporation Act] were provided in the remuneration report. Consistent with § 162 Abs. 3 AktG, we have not audited the contents of the remuneration report.

In our opinion, the disclosures required by § 162 Abs. 1 and 2 AktG have, in all material respects, been provided in the appended remuneration report. Our audit opinion does not cover the contents of the remuneration report.

Basis for the audit opinion

We conducted our audit of the remuneration report in accordance with § 162 Abs. 3 AktG, taking due account of the IDW Audit Standard: The Audit of the Remuneration Report pursuant to § 162 Abs. 3 AktG (IDW AS 870). Our responsibilities under this requirement and this standard are further described in the "Auditor's responsibilities" section of our report. Our audit firm has applied IDW Standard on Quality Control 1: Requirements to Quality Control for Audit Firms (IDW QS 1). We have complied with professional regulations pursuant to the German Auditors' Ordinance (WPO) and the Professional Code for German Public Auditors and German Chartered Accountants (BS WP/vBP), including the requirements in respect of independence.

Responsibilities of the executive directors and the supervisory board

The executive directors and the supervisory board are responsible for the preparation of the remuneration report, including the associated disclosures, in such a way as to satisfy the requirements of § 162 AktG. In addition, they are responsible for such internal controls as they have determined necessary to enable the preparation of a remuneration report, including the associated disclosures, that is free from material misstatement, whether due to fraud or error.

Auditor's responsibilities

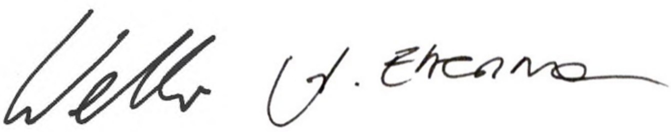
Our objective is to obtain reasonable assurance about whether the disclosures required by § 162 Abs. 1 and 2 AktG have, in all material respects, been provided in the remuneration report, as well as to issue a report that includes our audit opinion.

We planned and conducted our audit in such a way as to enable us to ascertain the formal completeness of the remuneration report by comparing the disclosures provided in the remuneration report with the disclosures required by § 162 Abs. 1 and 2 AktG. Consistent with § 162 Abs. 3 AktG, we have not audited the accuracy of the contents provided in disclosures, the completeness of the contents of individual disclosures or the appropriate presentation of the remuneration report.

Essen, 3 December 2022

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft



Ralph Welter	Andrea Ehrenmann
Wirtschaftsprüfer [German Public Auditor]	Wirtschaftsprüferin [German Public Auditor]

Other Disclosures

Auditor's Report on Combined Non-Financial Declaration

INDEPENDENT PRACTITIONER'S REPORT ON A LIMITED ASSURANCE ENGAGEMENT ON NON-FINANCIAL REPORTING

To MVV Energie AG, Mannheim

We have performed a limited assurance engagement on the Combined Non-Financial Declaration of MVV Energie AG, Mannheim, (hereinafter the "company") for the period from 1 October 2021 to 30 September 2022, which is included in the "Combined Non-Financial Declaration" section of the combined management report (hereinafter the "Combined Non-Financial Declaration").

Our assurance engagement did not extend in scope to the external documentation sources or expert opinions referred to in the Combined Non-Financial Declaration.

Responsibilities of executive directors

The executive directors of the company are responsible for the preparation of the Combined Non-Financial Declaration in accordance with § 315c in conjunction with § 289c to § 289e HGB and with Article 8 of REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL dated 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the supplementing Delegated Acts, as well as the company's own interpretation of the wordings and terms contained in the EU Taxonomy Regulation and in the supplementing Delegated Acts as disclosed in the "EU Taxonomy" section of the Combined Non-Financial Declaration.

This responsibility of the company's executive directors includes the selection and application of appropriate methods of non-financial reporting, as well as making assumptions and estimates related to individual non-financial disclosures of the Group which are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal controls as they have determined necessary to enable the preparation of a Combined Non-Financial Declaration that is free from material misstatements due to fraudulent acts (manipulation of the Non-Financial Declaration) or errors.

The EU Taxonomy Regulation and the supplementing Delegated Acts contain wordings and terms that are still subject to substantial uncertainties regarding their interpretation and for which not all clarifications have yet been published. The executive directors have therefore included a description of their interpretation of the EU Taxonomy Regulation and the supplementing Delegated Acts in the "EU Taxonomy" section of the Combined Non-Financial Declaration. They are responsible for the tenability of this interpretation. Due to the innate risk of diverging interpretations of vague legal concepts, the legal conformity of this interpretation is subject to uncertainty.

Independence and quality control of the audit firm

We have complied with the German professional provisions regarding independence and with other requirements governing professional conduct.

Our audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Accountants (Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer: BS WP/vBP), as well as the Standard on Quality Control 1: Requirements to Quality Control for Audit Firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis – IDW QS 1) published by the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer: IDW) – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the disclosures made in the Non-Financial Declaration based on the assurance engagement we have performed.

We conducted our assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This requires that we plan and perform the assurance engagement to allow us to conclude with limited assurance that nothing has come to our attention that causes us to believe that the company's Combined Non-Financial Declaration, with the exception of the external documentation sources or expert opinions referred to in the Combined Non-Financial Declaration, has not been prepared, in all material respects, in accordance with § 315c in conjunction with § 289c to § 289e HGB and the EU Taxonomy Regulation, the supplementing Delegated Acts and the interpretations by the company's executive directors presented in the "EU Taxonomy" section of the Combined Non-Financial Declaration.

The assurance procedures in a limited assurance engagement are less extensive than in a reasonable assurance engagement; a substantially lower level of assurance is therefore obtained. The assurance procedures selected depend on the practitioner's judgment.

Within the scope of our assurance engagement, we performed, among others, the following assurance procedures and further activities:

- Obtaining an understanding of the structure of the sustainability organisation and of stakeholder engagement
- Enquiries of the executive directors and personnel involved in the preparation of the Non-Financial Declaration regarding the preparation process, the internal control system relating to this process and select disclosures in the Combined Non-Financial Declaration
- Identification of the likely risks of misstatement of the Combined Non-Financial Declaration
- Analytical evaluation of select disclosures in the Combined Non-Financial Declaration
- Comparison of select disclosures with corresponding data in the consolidated financial statements and the group management report
- Evaluation of the presentation of the Combined Non-Financial Declaration
- Evaluation of the process used to identify taxonomy-aligned economic activities and the corresponding disclosures in the Combined Non-Financial Declaration
- Enquiries as to the relevance of climate-related risks

The executive directors are required to interpret vague legal concepts when determining the disclosures made under Article 8 of the EU Taxonomy Regulation. Due to the innate risk of diverging interpretations of these concepts, the legal conformity of their interpretation, and thus in this respect of our assurance engagement, is subject to uncertainty.

Assurance conclusion

Based on the assurance procedures performed and assurance evidence obtained, nothing has come to our attention that causes us to believe that the company's Combined Non-Financial Declaration for the period from 1 October 2021 to 30 September 2022 has not been prepared, in all material respects, in accordance with § 315c in conjunction with § 289c to § 289e HGB and the EU Taxonomy Regulation, the supplementing Delegated Acts and the interpretations by the company's executive directors presented in the "EU Taxonomy" section of the Combined Non-Financial Declaration. We do not issue any assurance conclusion on the external documentation sources or expert opinions referred to in the Combined Non-Financial Declaration.

Restriction on utilisation of assurance report

We point out that the assurance engagement has been performed for the purposes of the company and that the report is solely intended to inform the company about the result of the limited assurance engagement. The report may therefore not be suited for any purpose other than that stated. It is not intended for any third parties to base any (financial) decision thereon. Our responsibility is solely towards the company. We do not assume any responsibility towards third parties. Our assurance conclusion is not modified in this respect.

Munich, 14 November 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Hendrik Fink
[German Public Auditor]

ppa. Meike Beenken

Five-Year Overview

Five-year overview	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018
Financial key figures					
Sales and earnings					
Adjusted sales excluding energy taxes (Euro million)	4,199	4,113	3,515	3,756	3,903
Adjusted EBITDA [1] (Euro million)	564	482	449	409	443
Adjusted EBIT [1] (Euro million)	353	278	233	225	228
Adjusted EBT [1] (Euro million)	322	234	181	168	179
Adjusted annual net income [1] (Euro million)	249	177	128	115	111
Adjusted annual net income after minority interests [1] (Euro million)	176	150	104	98	94
Capital structure					
Total assets at 30 September (Euro million)	24,328	14,810	5,031	4,822	5,140
Equity at 30 September (Euro million)	2,446	1,759	1,534	1,535	1,625
Adjusted total assets at 30 September [2] (Euro million)	6,888	5,815	4,582	4,472	4,152
Adjusted equity at 30 September [2] (Euro million)	1,836	1,662	1,571	1,544	1,550
Adjusted equity ratio [2] (%)	27.1	28.6	34.3	34.5	37.3
Net financial debt [3] (Euro million)	32	628	1,374	1,345	1,075
Cash flow and investments					
Cash flow from operating activities (Euro million)	952	1,203	383	238	331
Investments (Euro million)	335	306	322	310	290
Value performance					
ROCE [4] (%)	16.2	10.2	7.7	7.9	8.5
WACC [5] (%)	6.6	5.9	6.0	6.3	6.3
Value spread [6] (%)	9.6	4.3	1.7	1.6	2.2
Capital employed [7] (Euro million)	2,178	2,715	3,018	2,847	2,674
Share					
Closing price (Xetra) at 30 September [3] (Euro)	28.80	32.00	26.00	26.50	26.30
Market capitalisation at 30 September (Euro million)	1,898	2,109	1,714	1,747	1,733
Number of shares at 30 September (000s)	65,907	65,907	65,907	65,907	65,907
Dividend per share (Euro)	1.05 [8]	1.05	0.95	0.90	0.90
Dividend total (Euro million)	69.2 [8]	69.2	62.6	59.3	59.3
Payout ratio [9] (%)	39 [8]	46	60	61	63
Dividend yield [10] (%)	3.6 [8]	3.3	3.7	3.4	3.4
Adjusted earnings per share [1] (Euro)	2.67	2.28	1.57	1.49	1.43
Price/earnings ratio [10]	10.8	14.0	16.6	17.8	18.4

1 Excluding non-operating measurement items for financial derivatives, excluding restructuring result, including interest income from finance leases and excluding structural adjustment for part-time early retirement

2 Excluding non-operating measurement items for financial derivatives

3 Non-current and current financial debt less cash and cash equivalents

4 Return on capital employed: adjusted EBIT as percentage of capital employed

5 Weighted average cost of capital

6 Value spread (ROCE less WACC)

7 Adjusted equity plus financial debt plus provisions for pensions and similar obligations less cash and cash equivalents (calculated as annual average)

8 Subject to approval by Annual General Meeting on 10 March 2023

9 Payout ratio based on adjusted annual net income after minority interests (IFRS)

10 Basis: closing price (XETRA) at 30 September

Five-year overview					
	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018
Non-financial key figures					
Direct CO_2 emissions (Scope 1) [1, 2] (tonnes 000s)	3,647	3,510	3,315	3,582	3,869
Indirect CO_2 emissions (Scope 2) [1, 2, 3] (tonnes 000s)	147	115	219	8	8
Indirect CO_2 emissions (Scope 3) [1, 2, 3] (tonnes 000s)	5,072	5,310	4,367	5,119	6,925
Net CO_2 savings [1] (tonnes 000s)	978	1,002	766	439	438
Electricity generation capacity from renewable energies [1] (MW_e)	614	564	531	491	479
Renewable energies as share of proprietary electricity generation [1] (%)	32	32	34	33	31
Electricity generation volumes from renewable energies [1] (kWh million)	1,295	1,217	1,274	1,154	1,196
Green heat generation capacity [1] (MW_t)	861	793	752	842	801
Green heat as share of proprietary heat generation [1, 4] (%)	39	36	31	29	30
Green heat generation volumes [1, 2, 4] (kWh million)	2,662	2,561	1,990	1,933	2,053
Completed development of new renewable energies plants (MW_e)	476	610	262	460	1,011
Operations management for renewable energies plants (MW_e)	3,779	3,811	3,729	3,534	3,063
Number of employees at 30 September (headcount)					
MVV	6,556	6,470	6,260	6,113	5,978
of which women	1,864	1,825	1,760	1,756	1,701
of which men	4,692	4,645	4,500	4,357	4,277
of which full-time employees	5,529	5,513	5,324	5,217	5,138
of which part-time employees	1,027	957	936	896	840
Number of trainees at 30 September (headcount)	335	340	341	330	312
Share of female managers at 30 September (%)	16	14	15	15	14
Accident frequency rate (LTIF) [5] (number of accidents per 1,000,000 hours of work)	3.7	4.1	6.7	7.7	6.7

1 Fully consolidated and at-equity companies

2 Previous year's figure adjusted

3 Emissions from energy losses in grid operations, which were recognised in Scope 3.9 until the 2019 financial year, have been reported pursuant to the GHG Protocol in Scope 2 since the 2020 financial year.

4 Heat from biomass, biogas and energy from waste plants, including RDF plants

5 Figures for 2021, 2020, 2019, 2018 and 2017 calendar years

EU Taxonomy Tables

Sales (turnover)

Sales (turnover)																				
				Significant contribution criteria						DNSH criteria (“do no significant harm”)										
Economic activities (1)	Codes (2)	Absolute turnover (3)	Share of turnover (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Share of taxonomy-aligned turnover in FY 2022 (18)	Share of taxonomy-aligned turnover in FY 2021[1] (19)	Category (enabling activities) (20)	Category “(transition activities)” (21)
		Euro 000s	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. Taxonomy-eligible activities																				
A.1 Environmentally sustainable activities (taxonomy-aligned)																				
Electricity generation using solar photovoltaic technology	4.1.	1,818	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Electricity generation from wind power	4.3.	60,293	1.4	100	0	–	–	–	–	Y	Y						1.4	–	–	–
Electricity generation from hydropower	4.5.	665	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Electricity generation from bioenergy	4.8.	5,219	0.1	100	0	–	–	–	–	Y	Y						0.1	–	–	–
Transmission and distribution of electricity	4.9.	202,087	4.8	100	0	–	–	–	–	Y	Y						4.8	–	E	–
Storage of thermal energy	4.11.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Manufacture of biogas and biofuels for use in transport and of bioliquids	4.13.	23,445	0.6	100	0	–	–	–	–	Y	Y						0.6	–	–	–
Transmission and distribution networks for renewable and low-carbon gases	4.14.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
District heating/cooling distribution	4.15.	87,489	2.1	100	0	–	–	–	–	Y	Y						2.1	–	–	–
Installation and operation of electric heat pumps	4.16.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–

Cogeneration of heat/cool and power from bioenergy	4.20.	1,288	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Production of heat/cool from bioenergy	4.24.	6,328	0.2	100	0	–	–	–	–	Y	Y						0.2	–	–	–
Production of heat/cool using waste heat	4.25.	32,999	0.8	100	0	–	–	–	–	Y	Y						0.8	–	–	–
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Construction, extension and operation of water collection, treatment and supply systems	5.1.	49,762	1.2	100	0	–	–	–	–	Y	Y						1.2	–	–	–
Collection and transport of non-hazardous waste in source segregated fractions	5.5.	13,799	0.3	100	0	–	–	–	–	Y	Y						0.3	–	–	–
Anaerobic digestion of bio-waste	5.7.	2,962	0.1	100	0	–	–	–	–	Y	Y						0.1	–	–	–
Infrastructure enabling low-carbon road transport and public transport	6.15.	409	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of energy efficiency equipment	7.3.	868	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	7.4.	2,632	0.1	100	0	–	–	–	–	Y	Y						0.1	–	E	–
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5.	392	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of renewable energy technologies	7.6.	258,962	6.2	100	0	–	–	–	–	Y	Y						6.2	–	E	–
Professional services related to energy performance of buildings	9.3.	4,475	0.1	100	0	–	–	–	–	Y	Y						0.1	–	E	–
Turnover with environmentally sustainable activities (taxonomy-aligned) (A.1)		**755,892**	**18.0**	**100**	**0**												**18.0**	**–**		
A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																				
Electricity generation from gaseous fossil fuels	4.29.	30,375	0.7	50	50															
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30.	91,100	2.2	50	50															
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31.	51,606	1.2	50	50															
Data-driven solutions for GHG emissions reductions	8.2.	5,248	0.1	100	0															
Turnover with taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		**178,329**	**4.2**	**100**	**0**															
Total (A.1 + A.2)		**934,221**	**22.2**	**100**	**0**												**22.2**			
B. Non-taxonomy-eligible activities																				
Turnover with non-taxonomy-eligible activities (B)		**3,265,276**	**77.8**	**100**	**0**												**77.8**			
Total (A + B)		**4,199,497**	**100.0**	**100**	**0**												**100.0**			

1 No figures available for previous year

Investment expenses (CapEx)

Investment expenses (CapEx)				Significant contribution criteria						DNSH criteria ("do no significant harm")										
Economic activities (1)	Codes (2)	Absolute turnover (3)	Share of turnover (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Share of taxonomy-aligned turnover in FY 2022 (18)	Share of taxonomy-aligned turnover in FY 2021[1] (19)	Category (enabling activities) (20)	Category “ (transition activities)” (21)
		Euro 000s	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. Taxonomy-eligible activities																				
A.1 Environmentally sustainable activities (taxonomy-aligned)																				
Electricity generation using solar photovoltaic technology	4.1.	12,649	3.6	100	0	–	–	–	–	Y	Y						3.6	–	–	–
Electricity generation from wind power	4.3.	9,534	2.7	100	0	–	–	–	–	Y	Y						2.7	–	–	–
Electricity generation from hydropower	4.5.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Electricity generation from bioenergy	4.8.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Transmission and distribution of electricity	4.9.	41,741	11.9	100	0	–	–	–	–	Y	Y						11.9	–	E	–
Storage of thermal energy	4.11.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Manufacture of biogas and biofuels for use in transport and of bioliquids	4.13.	299	0.1	100	0	–	–	–	–	Y	Y						0.1	–	–	–
Transmission and distribution networks for renewable and low-carbon gases	4.14.	21,169	6.1	100	0	–	–	–	–	Y	Y						6.1	–	–	–
District heating/cooling distribution	4.15.	28,536	8.2	100	0	–	–	–	–	Y	Y						8.2	–	–	–
Installation and operation of electric heat pumps	4.16.	3,198	0.9	100	0	–	–	–	–	Y	Y						0.9	–	–	–
Cogeneration of heat/cool from bioenergy	4.20.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Production of heat/cool from bioenergy	4.24.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Production of heat/cool using waste heat	4.25.	32,718	9.4	100	0	–	–	–	–	Y	Y						9.4	–	–	–

Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31.	32,233	9.2	100	0	–	–	–	–	Y	Y						9.2	–	–	–
Construction, extension and operation of water collection, treatment and supply systems	5.1.	19,197	5.5	100	0	–	–	–	–	Y	Y						5.5	–	–	–
Collection and transport of non-hazardous waste in source segregated fractions	5.5.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Anaerobic digestion of bio-waste	5.7.	5,869	1.7	100	0	–	–	–	–	Y	Y						1.7	–	–	–
Infrastructure enabling low-carbon road transport and public transport	6.15.	4,395	1.3	100	0	–	–	–	–	Y	Y						1.3	–	E	–
Installation, maintenance and repair of energy efficiency equipment	7.3.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	7.4.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5.	34	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of renewable energy technologies	7.6.	50,455	14.4	100	0	–	–	–	–	Y	Y						14.4	–	E	–
Professional services related to energy performance of buildings	9.3.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
CapEx for environmentally sustainable activities (taxonomy-aligned) (A.1)		**262,027**	**74.9**														**74.9**	**–**		
A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																				
Electricity generation from gaseous fossil fuels	4.29.	82	0.0	100																
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30.	2,122	0.6	100																
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31.	–	–	100																
Data-driven solutions for GHG emissions reductions	8.2.	104	0.0	100																
CapEx for taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		**2,308**	**0.7**																	
Total (A.1 + A.2)		**264,335**	**75.6**														**75.6**			
B. Non-taxonomy-eligible activities																				
CapEx for non-taxonomy-eligible activities (B)		**85,448**	**24.4**														**24.4**			
Total (A + B)		**349,783**	**100.0**														**100.0**			

1 No figures available for previous year

Operating expenses (OpEx)

Operating expenses (OpEx)

				Significant contribution criteria						DNSH criteria (“do no significant harm”)										
Economic activities (1)	Codes (2)	Absolute turnover (3)	Share of turnover (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Share of taxonomy-aligned turnover in FY 2022 (18)	Share of taxonomy-aligned turnover in FY 2021[1] (19)	Category (enabling activities) (20)	Category “ (transition activities)” (21)
		Euro 000s	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. Taxonomy-eligible activities																				
A.1 Environmentally sustainable activities (taxonomy-aligned)																				
Electricity generation using solar photovoltaic technology	4.1.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Electricity generation from wind power	4.3.	6,545	1.1	100	0	–	–	–	–	Y	Y						1.1	–	–	–
Electricity generation from hydropower	4.5.	6	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Electricity generation from bioenergy	4.8.	1,012	0.2	100	0	–	–	–	–	Y	Y						0.2	–	–	–
Transmission and distribution of electricity	4.9.	47,648	8.2	100	0	–	–	–	–	Y	Y						8.2	–	E	–
Storage of thermal energy	4.11.	15	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Manufacture of biogas and biofuels for use in transport and of bioliquids	4.13.	3,018	0.5	100	0	–	–	–	–	Y	J						0.5	–	–	–
Transmission and distribution networks for renewable and low-carbon gases	4.14.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
District heating/cooling distribution	4.15.	10,787	1.8	100	0	–	–	–	–	Y	Y						1.8	–	–	–
Installation and operation of electric heat pumps	4.16.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Cogeneration of heat/cool and power from bioenergy	4.20.	531	0.1	100	0	–	–	–	–	Y	Y						0.1	–	–	–
Production of heat/cool from bioenergy	4.24.	2,173	0.4	100	0	–	–	–	–	Y	Y						0.4	–	–	–
Production of heat/cool using waste heat	4.25.	12,880	2.2	100	0	–	–	–	–	Y	Y						2.2	–	–	–

Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Construction, extension and operation of waste water collection and treatment systems	5.1.	16,680	2.9	100	0	–	–	–	–	Y	Y						2.9	–	–	–
Collection and transport of non-hazardous waste in source segregated fractions	5.5.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	–	–
Anaerobic digestion of bio-waste	5.7.	1,929	0.3	100	0	–	–	–	–	Y	Y						0.3	–	–	–
Infrastructure enabling low-carbon road transport and public transport	6.15.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of energy efficiency equipment	7.3.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	7.4.	0	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	7.5.	137	0.0	100	0	–	–	–	–	Y	Y						0.0	–	E	–
Installation, maintenance and repair of renewable energy technologies	7.6.	51,820	8.9	100	0	–	–	–	–	Y	Y						8.9	–	E	–
Professional services related to energy performance of buildings	9.3.	498	0.1	100	0	–	–	–	–	Y	Y						0.1	–	E	–
OpEx for environmentally sustainable activities (taxonomy-aligned) (A.1)		**155,679**	**26.6**														**26.6**			
A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																				
Electricity generation from gaseous fossil fuels	4.29.	562	0.1	100																
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	4.30.	2,947	0.5	100																
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	4.31.	289	0.0	100																
Data-driven solutions for GHG emissions reductions	8.2.	0	–	100																
OpEx for taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		**3,798**	**0.7**																	
Total (A.1 + A.2)		**159,477**	**27.3**														**27.3**			
B. Non-taxonomy-eligible activities																				
OpEx for non-taxonomy-eligible activities (B)		**424,782**	**72.7**														**72.7**			
Total (A + B)		**584,259**	**100.0**														**100.0**			

1 No figures available for previous year

Sales (turnover)

Sales (turnover) FY 2022: Template 1 Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	No
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	No
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	No
Row	**Fossil gas related activities**	
4.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	Yes
5.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	Yes
6.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	Yes

Sales (turnover) FY 2022: Template 2 Taxonomy-aligned economic activities (denominator)

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**755,892**	**18.0**	**755,892**	**18.0**	**–**	**–**
8.	**Total applicable KPI**	**4,199,497**					

Sales (turnover) FY 2022: Template 3 Taxonomy-aligned economic activities (numerator)

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the applicable KPI**	**755,892**	**100.0**	**755,892**	**100.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**755,892**	**100.0**	**755,892**	**100.0**	**–**	**–**

Sales (turnover) FY 2022: Template 4 Taxonomy-eligible but not taxonomy-aligned economic activities

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	30,375	17.0	30,375	17.0	–	–
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	91,100	51.1	91,100	51.1	–	–
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	51,606	28.9	51,606	28.9	–	–
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**5,248**	**2.9**	**5,248**	**2.9**	**–**	**–**
8.	**Total amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**178,329**	**100.0**	**178,329**	**100.0**	**–**	**–**

Sales (turnover) FY 2022: Template 5 Taxonomy-non-eligible economic activities

Row	Economic activities	Euro 000s	Percentage
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**3,265,276**	**100.0**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**3,265,276**	**100.0**

Investment expenses (CapEx)

Investment expenses (CapEx) FY 2022: Template 1 Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	No
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	No
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	No
Row	**Fossil gas related activities**	
4.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	Yes
5.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	Yes
6.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	Yes

Investment expenses (CapEx) FY 2022: Template 2 Taxonomy-aligned economic activities (denominator)

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	32,233	9.2	32,233	9.2	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**229,794**	**65.7**	**229,794**	**65.7**	**–**	**–**
8.	**Total applicable KPI**	**349,783**					

Investment expenses (CapEx) FY 2022: Template 3 Taxonomy-aligned economic activities (numerator)

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages) CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	32,233	12.3	32,233	12.3	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the applicable KPI**	**229,794**	**87.7**	**229,794**	**87.7**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**262,027**	**100.0**	**262,027**	**100.0**	**–**	**–**

Investment expenses (CapEx) FY 2022: Template 4 Taxonomy-eligible but not taxonomy-aligned economic activities

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages) CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	82	3.6	82	3.6	–	–
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	2,122	91.9	2,122	91.9	–	–
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0,0	0	0.0	–	–
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**104**	**4.5**	**104**	**4.5**	**–**	**–**
8.	**Total amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**2,308**	**100.0**	**2,308**	**100.0**	**–**	**–**

Investment expenses (CapEx) FY 2022: Template 5 Taxonomy-non-eligible economic activities

Row	Economic activities	Euro 000s	Percentage
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**85,448**	**100.0**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**85,448**	**100.0**

Operating expenses (OpEx)

Operating expenses (OpEx) FY 2022: Template 1 Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	No
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	No
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	No
Row	**Fossil gas related activities**	
4.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	Yes
5.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	Yes
6.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	Yes

Operating expenses (OpEx) FY 2022: Template 2 Taxonomy-aligned economic activities (denominator)

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0	0.0	0	0.0	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**155,679**	**26.6**	**155,679**	**26.6**	**–**	**–**
8.	**Total applicable KPI**	**584,259**					

Operating expenses (OpEx) FY 2022: Template 3 Taxonomy-aligned economic activities (numerator)

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages) CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0	0.0	0	0.0	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the applicable KPI**	**155,679**	**100.0**	**155,679**	**100.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**155,679**	**100.0**	**155,679**	**100.0**	**–**	**–**

Operating expenses (OpEx) FY 2022: Template 4 Taxonomy-eligible but not taxonomy-aligned economic activities

Row	Economic activities	Amount and proportion (disclosed as monetary amounts and percentages) CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		Euro 000s	%	Euro 000s	%	Euro 000s	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	562	14.8	562	14.8	–	–
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	2,947	77.6	2,947	77.6	–	–
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	289	7.6	289	7.6	–	–
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**0**	**0.0**	**0**	**0.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**3,798**	**100.0**	**3,798**	**100.0**	**–**	**–**

Operating expenses (OpEx) FY 2022: Template 5 Taxonomy-non-eligible economic activities

Row	Economic activities	Euro 000s	Percentage
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**424,782**	**100.0**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**424,782**	**100.0**

Financial Calendar

14 December 2022

Annual Report
2022 Financial Year

14 December 2022

Annual Results Press Conference
and Analysts' Conference
2022 Financial Year

14 February 2023

3M Quarterly Statement
2023 Financial Year

10 March 2023

Annual General Meeting

15 May 2023

H1 Interim Report
2023 Financial Year

11 August 2023

9M Quarterly Statement
2023 Financial Year

14 December 2023

Annual Report
2023 Financial Year

14.12.2023

Annual Results Press Conference
and Analysts' Conference
2023 Financial Year

The dates of conference calls to be held with analysts during the financial year will be announced in good time.

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MVV's financial reports can be downloaded from our websites.

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