We inspire
with energy.

Annual Report
2023

Our future:
#climatepositive

MVV in Figures

	FY 2023	FY 2022	% change
Financial key figures			
Sales and earnings			
Adjusted sales excluding energy taxes (Euro million)	7,531	4,199	+ 79
Adjusted EBITDA [1] (Euro million)	1,087	564	+ 93
Adjusted EBITDA excluding disposal gains	954	509	+ 87
Adjusted EBIT [1] (Euro million)	880	353	>+ 100
Adjusted EBIT excluding disposal gains	747	298	>+ 100
Adjusted annual net income [1] (Euro million)	592	249	>+ 100
Adjusted annual net income after minority interests [1] (Euro million)	513	176	>+ 100
Capital structure			
Adjusted total assets at 30 September [2] (Euro million)	6,028	6,888	– 12
Adjusted total assets excluding margins at 30 September [2, 3] (Euro million)	5,872	5,434	+ 8
Adjusted equity at 30 September [2] (Euro million)	2,391	1,863	+ 28
Adjusted equity ratio at 30 September [2] (%)	39.7	27.1	+ 46
Adjusted equity ratio excluding margins at 30 September [2, 3] (%)	40.7	34.3	+ 19
Net financial debt at 30 September (Euro million)	823	32	>+ 100
Net financial debt excluding margins at 30 September [3] (Euro million)	840	1,449	– 42
Cash flow and investments			
Cash flow from operating activities (Euro million)	– 614	952	–
Cash flow from operating activities excluding margins [3] (Euro million)	786	357	>+ 100
Investments (Euro million)	344	335	+ 3
Value performance			
ROCE (%)	33.5	16.2	>+ 100
ROCE excluding disposal gains (%)	28.4	13.7	>+ 100
ROCE excluding margins [3] (%)	26.3	10.7	>+ 100
ROCE excluding disposal gains and excluding margins (%)	22.3	9.0	>+ 100
WACC (%)	8.0	6.6	+ 21
Value spread (%)	25.5	9.6	>+ 100
Value spread excluding disposal gains (%)	20.4	7.1	>+ 100
Value spread excluding margins [3] (%)	18.3	4.1	>+ 100
Value spread excluding disposal gains and excluding margins (%)	14.3	2.4	>+ 100
Capital employed (Euro million)	2,629	2,178	+ 21
Capital employed excluding margins [3] (Euro million)	3,346	3,298	+ 1
Share			
Adjusted earnings per share [1] (Euro)	7.78	2.67	>+ 100
Regular dividend per share (Euro)	1.15 [4]	1.05	+ 10
One-off dividend per share (Euro)	0.30 [4]	–	–

1 Excluding non-operating measurement items for financial derivatives and including interest income from finance leases

2 Excluding non-operating measurement items for financial derivatives

3 Excluding collateral deposited for counterparty default risk (margins)

4 Subject to approval by Annual General Meeting on 8 March 2024

	FY 2023	FY 2022	% change
Non-financial key figures			
Direct CO_2 emissions (Scope 1)[1, 2] (tonnes 000s)	2,684	3,649	– 26
Indirect CO_2 emissions (Scope 2)[1] (tonnes 000s)	127	147	– 14
Indirect CO_2 emissions (Scope 3)[1] (tonnes 000s)	5,984	5,072	+ 18
Electricity generation capacity from renewable energies[1, 3] (MW_e)	633	614	+ 3
Renewable energies as share of proprietary electricity generation[1] (%)	41	32	+ 28
Electricity generation volumes from renewable energies[1, 4] (kWh million)	1,398	1,295	+ 8
Green heat generation capacity[1] (MW_t)	812	861	– 6
Green heat as share of proprietary heat generation[1, 5] (%)	46	39	+ 18
Green heat generation volumes[1, 2, 5] (kWh million)	2,465	2,662	– 7
Completed development of new renewable energies plants (MW_e)	1,436	476	>+ 100
Operations management for renewable energies plants (MW_e)	3,708	3,779	– 2
Number of employees at 30 September (headcount)	6,390	6,556	– 3
of which women	1,880	1,864	+ 1
of which men	4,509	4,692	– 4
of which diverse	1	–	–
of which full-time employees	5,336	5,529	–3
of which part-time employees	1,054	1,027	+ 3
Number of trainees at 30 September (headcount)	331	335	– 1
Share of female managers at 30 September (%)	19	16	+ 19
Accident frequency rate (LTIF)[6] (number of accidents per 1,000,000 hours of work)	4.3	3.7	+ 16

,

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 2023 (28 MW)/30 September 2022 (30 MW)

4 Including electricity generation volumes from wind turbines for repowering at 30 September 2023 (31 million kWh)/30 September 2022 (21 million kWh)

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

6 Figures for 2022 and 2021 calendar years

Contents

To Our Shareholders

Contents

Letter from the CEO

Dr. Georg Müller

CEO of
MVV Energie AG

Dear Ladies and Gentlemen,

We will all remember the 2023 financial year as being exceptional in several respects. The war in Ukraine, with its dreadful impact on people and infrastructures, is entering its second winter. And the attack on Israel shortly after the end of our financial year gives grounds to fear a flashpoint with the potential to spread in the Middle East.

In terms of energy policy, 2023 was a year of new departures, one in which managing the direct consequences of the war in Ukraine was still rightly on the agenda. However, it was also a year that set its own focuses in terms of structuring the energy transition. This is particularly borne out by the measures to accelerate the expansion in wind and solar power, which have eased numerous obstacles and will now have to be practically implemented on project level. Further steps will be needed to achieve even greater momentum. The approval granted by the Federal Council to the German Building Energy Act (GEG) in the autumn brought one of the most controversial legislative processes of the year to a conclusion. Ultimately, the legislation is better than its reputation, but the debate surrounding its contents and the whole procedure cost credibility. It is expected to take effect on 1 January 2024 together with the federal legislation on municipal heat planning, which has precedence, and this may help to allay concerns. It has soon become clear, however, that additions and corrections will have to be made to the legislation. That is due not only but also not least to the objectively difficult nature of the matter. Another issue that has not yet been solved is that of how the controllable, modern power plants needed to supplement fluctuating volumes of renewable energies generation given their dependence on weather conditions should be financed. From the perspective of long-term supply security, the energy transition is therefore still incomplete.

Furthermore, it is becoming ever more apparent that the foundation for Germany's energy supply involves well-functioning grids for electricity, heat, gas, hydrogen and, further down the line, for captured CO_2. If planning and investment decisions are not to be delayed any further, it will be necessary to press swiftly ahead with the required reforms to the regulatory framework and the overarching, mutually coordinated grid system planning processes.

In the same year, 2023, MVV and its predecessor companies are marking their 150th anniversary. Given our eventful history since 1873, covering the years of rapid industrial expansion in the late 19th century, two world wars, reconstruction in the 1950s and 1960s, liberalisation around the turn of the present century and current endeavours to achieve targeted climate protection, this is certainly an occasion worth commemorating.

Consistent focus on the energy transition

With our consistent alignment to the energy transition and our Mannheim Model, we are making our contribution to building an energy system that is fit for the future. We were unswerving in our commitment to this course once again in the 2023 financial year. We launched operations with what is Germany's largest river heat pump that is integrated into a district heat system. Having already linked up our energy from waste plant in 2020, this represents the second stage of expansion in the heat transition in Mannheim. We will complete this in 2024 and then start work on the third stage to achieve 100 percent green heat. We have increased our proprietary electricity generation from renewable energies and taken over several photovoltaics parks into our portfolio. Our focus on sustainability ultimately also applies to our customer solutions. Here, we have become a full-service provider for customers' individual energy transitions in their homes and companies. This way, we made notable progress with all three components of our Mannheim Model – the heat transition, the electricity transition and customer solutions.

At the same time, our ambitious targets require us to repeatedly review and assess our portfolio of investments. In this, we chiefly consider factors such as their strategic compatibility, their economic viability and the contribution they make to our decarbonisation targets. This being so, in the past financial year we parted company with our activities in the Czech Republic and our shareholding in Stadtwerke Ingolstadt. Both had been fixed components of the MVV Group for many years. We are very satisfied with the sales prices achieved and the associated one-off impact on earnings in the 2023 financial year. This will boost MVV's ability to make investments in the years ahead.

Climate protection and successful business activity go hand in hand

With our #climatepositive course and our broad-based business portfolio, we yet again successfully seized the opportunities in a persistently challenging environment and generated strong adjusted EBIT of Euro 880 million. Above all, our trading activities posted an exceptionally robust performance. Here, we were able to generate substantial additional revenues, particularly in our trading with renewable energies and conventional energy trading. Having said that, it will not be possible to repeat this success on the same scale. From an operating perspective, we therefore expect our adjusted EBIT for the 2024 financial year to be within +/– 10 % of Euro 400 million. With the exception of 2023, this earnings target is still significantly higher than in past years.

Distribution of a one-off dividend

We have based our dividend policy on continuity and the development in our operating earnings for many years already. We are still just as committed to this approach. That is why we will propose an increase in the regular dividend of Euro 0.10 per share to Euro 1.15 per share to the Annual General Meeting in March 2024. Unless exceptional events arise, we view this as the new lower threshold for our regular dividend.

To mark the 150th anniversary of MVV and its predecessor companies and given the exceptional earnings performance, we are also proposing the distribution of a one-off dividend of Euro 0.30 per share. Our employees have also received a one-off special payment of Euro 1,500 calculated on the basis of full-time activity.

In parallel, we are retaining the surplus profit to enable us to implement the investments needed in the years ahead for us to meet our target of becoming #climatepositive. On this basis, we can offer our equity and debt providers a solid investment and a robust financing base.

#climatepositive by 2035

In the 2023 financial year, we documented once again that, for MVV, a #climatepositive future is not only possible on the technical front but can also be implemented in financial terms. We are now further significantly raising our climate protection ambitions and thus extending our pioneering role in shaping the energy future. We will become #climatepositive by 2035, five years earlier than originally planned. To make that possible, we will work with BECCUS (Bioenergy Carbon Capture Usage and Storage) to actively withdraw CO_2 from the atmosphere at an earlier date than previously planned and then permanently bind, use or store this gas. We have successfully reached the first milestones and this encourages us to set our sights higher. In Mannheim, we are currently testing the capture, liquefaction and loading of CO_2 with a pilot plant. In Dresden, our bio-waste anaerobic digestion plant is the first #climatepositive plant to launch operations. Before the end of the current decade, we will equip our other bio-waste anaerobic digestion and biomethane plants with CO_2 sinks. Our biomass and energy from waste plants are set to follow in the coming decade. This way, we will not only offset our own unavoidable residual emissions but, thanks to the volumes additionally withdrawn, become #climatepositive by 2035 already.

Accelerated tempo thanks to enhanced Mannheim Model

We will exploit all available potential to implement the energy transition, and thus achieve genuine climate protection, with all our strength and more rapidly than ever before. To make this possible, we expect to invest around Euro 7 billion in our green growth in the ten-year period until 2033.

The guiding framework remains our Mannheim Model, which we are continually developing further to make MVV even more resilient and effective. This model forms the basis for all our actions at the MVV Group and therefore applies to all locations. As we head towards a #climatepositive future, we are converting all our district heat generation in Mannheim and Offenbach to green energy sources by 2030. In Kiel, and thus Group-wide, we will complete this conversion by 2035 when the gas-fired power plant there is operated with hydrogen. In addition, we will more than triple our electricity generation from renewable energies by 2030: from 633 megawatts currently to 2,000 megawatts in 2030. And we aim not only to become #climatepositive ourselves as a company, but also to support our customers with their own climate neutrality. To this end, we will exclusively offer 100 % climate-neutral products and services by 2035 at the latest and gradually convert our existing customer contracts to green solutions.

Foundation as sign of responsibility

As an energy company with municipal roots and a particular infrastructural responsibility, we are an important part of society. For us, a commitment to developments within society is therefore part of our DNA. Our main focus is on the process of transformation involved in the energy transition, i.e. the changes arising in and through energy. That is why we have founded the charitable foundation "MVV Foundation for the Future – Foundation to Promote Transformation of and through Energy". This should particularly assist us in advancing the energy transition in those areas that are best addressed not only or not primarily from an entrepreneurial perspective.

Dear shareholders, we can look back on a very successful 2023 financial year. This impressive achievement by the whole of the MVV Group was driven first and foremost by all its employees. On behalf of the whole Executive Board, I would like to express my thanks to them for their dedication.

And now it is about building on our success to date despite the difficult times in which we find ourselves due to political developments around the world. Our strong 2023 financial year has laid an important foundation for our accelerated course to becoming #climatepositive by 2035. We look forward to continuing on this course together with you in future as well.

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 became 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

Christian Specht

Supervisory Board Chair
of MVV Energie AG

Dear Ladies and Gentlemen,

The Supervisory Board, of which I have been a member pursuant to the Articles of Incorporation since 2005, and now am in my capacity as the new Lord High Mayor of the City of Mannheim, elected me as its new Chair, and thus as successor to the previous holder of my office and Supervisory Board Chair, Dr. Peter Kurz, in August 2023. I would like to thank the Supervisory Board members for the trust they have placed in me with this election.

As Supervisory Board Chair, Dr. Peter Kurz constructively and critically accompanied the Executive Board in implementing MVV’s growth and sustainability strategy for 16 years, and thus played a key role in helping to shape the company’s successful development. On behalf of all colleagues, I would like to thank Dr. Peter Kurz warmly for his longstanding, responsible and successful work in the Supervisory Board of MVV Energie AG.

Great changes on the energy markets and climate change represent challenges, but also offer opportunities that MVV aims to seize consistently and competitively. In its actions, the company is guided by its #climatepositive strategy, which the Supervisory Board supports unreservedly. The heat transition already underway and the decarbonisation of electricity generation at all locations are progressing well and will determine the company’s investment activities in the years ahead. The German Building Energy Act (GEG) will bring fresh challenges; we can address these by offering bespoke solutions to customers that are closely coordinated to the respective municipal heat plans.

Given the scale of investments required here in the years ahead from members of the public and from companies, it is absolutely crucial that we should have a reliable political and legal framework.

Exceptional developments in marketing renewable energies and trading led to substantial operating earnings growth at MVV in the 2023 financial year. In the years ahead, MVV will have to absorb a large volume of investment to implement its climate protection strategy at all locations. Expanding district heat and making it green, strengthening electricity grids and further expanding renewable energies – all these measures require a solid capital base, one that will be further reinforced thanks to the company’s exceptionally high earnings. For the 2024 financial year, the company has set itself the goals of upholding its profitable growth course and further extending its climate protection efforts. In the Supervisory Board, we too are convinced: The future is #climatepositive.

Key focuses of Supervisory Board activities in 2023 financial year

In the 2023 year under report, the Supervisory Board performed the duties incumbent on it by law, the company’s Articles of Incorporation and its own Rules of Procedure in all aspects and with great diligence. The Executive Board was monitored and accompanied on an advisory basis in its management of the company. We based our activities here on the extensive reports we regularly received from the Executive Board in both written and oral form. Moreover, the Supervisory Board Chair was regularly in close contact with the Chief Executive Officer and with the other members of the Executive Board. As a result, the Supervisory Board was continuously informed about the company’s strategic decisions and its ongoing business performance, about the latest developments in the markets and legislation and about the company’s profitability.

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

Supervisory Board meetings and attendance

In the 2023 financial year, the Supervisory Board held four scheduled and one extraordinary meeting. Four of these meetings took place in person, while one was held in an online format.

The Audit Committee and the Personnel Committee held seven and three meetings respectively in the year under report. With one exception, all meetings were held as physical meetings. In keeping with the recommendation made by the German Corporate Governance Code, we disclose the attendance of members at the respective meetings.

Meeting attendance FY 2023

	Supervisory Board	Audit Committee	Personnel Committee
Christian Specht (Chair since 4 August 2023; previously Supervisory Board member)	5/5	–	1/1
Dr. Peter Kurz (Chair until 3 August 2023)	4/4	–	2/2
Angelo Bonelli	3/5	6/7	2/3
Timo Carstensen	5/5	–	–
Sabine U. Dietrich	2/5	–	–
Detlef Falk	5/5	6/7	–
Martin F. Herrmann	5/5	7/7	–
Barbara Hoffmann	4/5	–	3/3
Dr. Simon Kalvoda	5/5	–	–
Heike Kamradt-Weidner	5/5	7/7	3/3
Gregor Kurth	5/5	7/7	3/3
Thoralf Lingnau	4/5	–	–
Dr. Lorenz Näger	5/5	7/7	–
Erik Niedenthal (since 27 October 2022)	5/5	–	–
Tatjana Ratzel	5/5	–	–
Thorsten Riehle	5/5	–	–
Andreas Schöniger	5/5	–	3/3
Susanne Schöttke	4/5	–	–
Dr. Stefan Seipl	4/5	–	–
Susanne Wenz (until 31 August 2023)	0/4	–	–

The Executive Board informed the Supervisory Board at all regular meetings about the Group's operating performance. In this, it also dealt in detail with the course of business in individual business fields. Any deviations from the budget were specifically explained and evaluated. One particular focus consistently involved the aspects of liquidity, movements in key figures and the development in the risk radar. Non-financial key figures, such as the expansion in the renewable energies portfolio or occupational health and safety, were also regular components of these reports.

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

In the 2023 financial year, the training event for Supervisory Board members was held in person. The focus this year was on the topic of green heat with regard to further developments at the Stadtwerke Kiel and Energieversorgung Offenbach subsidiaries, as well as on extensive consideration of developments in the waste markets in Germany and Europe.

Topics addressed by full Supervisory Board

At our meeting in **December 2022,** we dealt extensively with the financial results for the 2022 financial year and with the dividend proposal submitted by the Executive Board. Following due consultation in the Audit Committee and in-depth discussion, we acknowledged and approved the extensive oral and written report provided by the auditor we commissioned to perform the audit, PriceWaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Essen, on the findings of its audit. In the further course of the meeting, we discussed and approved the draft resolutions for the Annual General Meeting. In addition, we set thresholds for the variable remuneration payable to Executive Board members for the 2023 financial year. This topic had previously been addressed in the Personnel Committee. As well as adopting several minor amendments to the articles of subsidiaries, we also approved a one-off payment to Dr. Hansjörg Roll to acknowledge his coordination of Executive Board activities during the absence of the Chief Executive Officer in the 2022 financial year.

In **March 2023,** the Executive Board informed us about the course of business in the first three months of the 2023 financial year and the Group's current situation. The Executive Board also reported on opportunities in the onshore wind power business which, after extensive appraisal, we approved. Moreover, our agenda for this meeting also included the resolution to commission the auditor for the 2023 financial year and information about the topics of information security, data protection and e-mobility. We unanimously approved the proposal submitted by the Personnel Committee to extend the contract with the Chief Executive Officer, Dr. Georg Müller.

At the meeting in **June 2023,** 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 2023 financial year and the outlook for the current financial year. Following extensive report from the Audit Committee, we endorsed its recommendation to the Annual General Meeting concerning the election of an auditor to be newly commissioned at regular intervals from the 2024 financial year. We also granted our approval for the issuing of contractual guarantees for the construction of new data centres by the DC-Datacenter-Group subsidiary. The Executive Board further reported to us on major personnel-related topics, and particularly on measures to secure specialist staff, work safety and accident prevention, as well as on digitalisation and activities in the Smart Cities business field. We endorsed the proposal made by the Executive Board to establish the charitable foundation "MVV Foundation for the Future – Foundation to Promote Transformation of and through Energy" to mark the company's 150th anniversary.

At the extraordinary meeting in **August 2023,** the Supervisory Board elected its new Chair and renewed the composition of its committees.

Alongside the presentation of the results for the first nine months of the 2023 financial year, the agenda for our **September meeting** included information about the current course of business and market situation and the business plan for the 2024 financial year, which we examined in great detail, particularly with regard to volatilities in prices, challenges in connection with climate change and relevant legislation. Furthermore, we addressed the three-year plan, the long-term corporate strategy and the Declaration of Compliance with the German Corporate Governance Code.

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 seven meetings in the 2023 financial year. In its deliberations, it focused on in-depth analysis and review of the annual financial statements of MVV Energie AG, the consolidated financial statements and the combined management report for the 2022 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 2023 financial year. Furthermore, the committee dealt on a quarterly basis with the company's risk situation, liquidity and risk management.

Together with the Executive Board, the committee also discussed the company's 2023 business plan and its medium-term planning and strategic alignment. Following its detailed review, the committee recommended that the Supervisory Board should approve the budget submitted for the 2023 financial year. Moreover, the committee reviewed 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. In addition, it determined the audit focuses for the 2023 financial year, which were then suitably communicated to the auditor. Further topics discussed by the committee included the ongoing 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, or to the relevant status reports. Recommendations made by the committee were implemented by the Executive Board.

Further topics of extensive deliberation included relationships with the auditor, proposals for the election of the auditor, the audit engagement, the review of the auditor's independence and its remuneration. Moreover, the Audit Committee conducted the selection procedure to determine the auditor, who has to be changed at regular intervals, for the audit of the annual and consolidated financial statements and for further audit services at the MVV Group from the 2024 financial year. As already mentioned, the Audit Committee submitted a recommendation for the auditor to be proposed for election by shareholders at the Annual General Meeting in March 2024.

The **Personnel Committee** held three meetings in the financial year under report and submitted its recommendations to the Supervisory Board. Topics addressed by the committee mainly involved matters relating to the remuneration of Executive Board members and preparations to extend the contract with the Chief Executive Officer.

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

Johannes Böttcher retired from the Supervisory Board as of 26 October 2022, while Susanne Wenz stood down as of 31 August 2023. We would like to thank both members for their longstanding and trust-based work on the board. Among the employee representatives, Johannes Böttcher was succeeded by Erik Niedenthal, while Kathrin Biro, trade union secretary and managing director of ver.di's Rhine-Neckar district assumed the position previously held by Susanne Wenz as of 16 October 2023.

As already reported, Dr. Peter Kurz, the longstanding Supervisory Board Chair, stood down from his position on the Supervisory Board as of 3 August 2023. Christian Specht, Lord High Mayor of the City of Mannheim, was elected to succeed him as Supervisory Board Chair. In accordance with the Articles of Incorporation, the City of Mannheim decided to appoint Dr. Volker Proffen, Head of its Finance Department, as a further member of the Supervisory Board as of 16 October 2023.

No changes arose in the composition of the Executive Board in the financial year under report. The Supervisory Board extended Dr. Georg Müller's appointment as Chief Executive Officer for a further five-year term.

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 2023 financial year at our meeting on 22 September 2023. The self-assessment recommended by the Code was most recently performed in the 2022 financial year with support from an external consultant. The next assessment is scheduled for the 2024 financial year.

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 2023 financial year by the Annual General Meeting on 10 March 2023. The declaration of independence from the auditor has been submitted to the Supervisory Board.

The annual financial statements of MVV Energie AG for the 2023 financial year have been prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act (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 2023 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, the 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 1 December 2023, 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 2023 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

The direct and indirect turbulences unleashed on us by the war in Ukraine may have eased, but the situation on the energy markets has changed permanently. The effects of climate change on global warming, the impact of which was again apparent around the world last summer, also call for swift and consistent changes, particularly in terms of reducing CO_2 emissions.

With its strategy, its products and its solutions, MVV has found the right answers.

The company’s operating performance in the 2023 financial year was exceptional and must be honoured, above all because this success is the result of alert market surveillance, outstanding risk management and a farsighted, diversified strategy.

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

Christian Specht
Chair

Mannheim, December 2023

Share

Market situation

New record highs and share price growth on stock markets

Developments on international stock markets in the period under report were influenced above all by high inflation and the more restrictive monetary policies adopted by central banks in response. The DAX, Germany's lead index, closed 2022 at 13,924 points, 12.3 % lower than at the end of 2021. The recovery in the DAX that had already begun in the 4th quarter of 2022 then continued at the beginning of 2023. The index closed January at 15,128 points, already 8.7 % up on the end of 2022, and showed a robust overall trend as the year progressed. Financial markets, which were adversely affected by the war in Ukraine, high inflation, rising interest rates and fears of a contagious banking crisis, were nevertheless buoyed by unexpectedly strong corporate earnings, higher dividend payments in some cases, a relatively stable global economy and hopes that central banks would reduce the pace of interest rate hikes. In May 2023, the DAX reached 16,331 points and thus for the first time exceeded its high from the beginning of January 2022. This was followed by further highs, most recently of 16,528 points at the end of July 2023. Following a series of interest rate hikes, the European Central Bank (ECB) had for the first time not excluded the possibility of pausing further increases. On 20 September, the ECB nevertheless announced its tenth consecutive increase in the base rate, in this case to 4.5 %. At the end of September 2023, the DAX stood at 15,387 points, 27.0 % higher than the equivalent figure for the previous year.

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

		FY 2023	FY 2022
Closing price at 30 September [1]	Euro	31.00	28.80
Annual high [1]	Euro	34.00	37.20
Annual low [1]	Euro	26.90	27.80
Market capitalisation at 30 September	Euro million	2,043	1,898
Average daily trading volume	No. of shares	1,341	2,822
No. of individual shares at 30 September [2]	000s	65,907	65,907
Adjusted earnings per share [3, 4]	Euro	7.78	2.67
Cash flow from operating activities per share [4]	Euro	– 7.04	14.45
Adjusted carrying amount per share [4, 5, 6]	Euro	31.33	23.99
Price/earnings ratio [7]		4.0	10.8
Price/cash flow ratio [7]		– 3.3	2.0
Regular dividend per share	Euro	1.15 [10]	1.05
One-off dividend per share	Euro	0.30 [10]	–
Total dividend [8]	Euro million	75.8 [10]	69.2
Total dividend [9]	Euro million	95.6 [10]	–
Dividend yield [8]	%	3.7 [10]	3.6
Dividend yield [9]	%	4.7 [10]	–

1 XETRA trading

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

3 Excluding non-operating measurement items for financial derivatives and including interest income from finance leases

4 Number of shares (weighted annual average)

5 Excluding non-operating measurement items for financial derivatives

6 Excluding minority interests

7 Basis: closing price in XETRA trading at 30 September

8 Basis: regular dividend

9 Basis: regular dividend plus one-off dividend

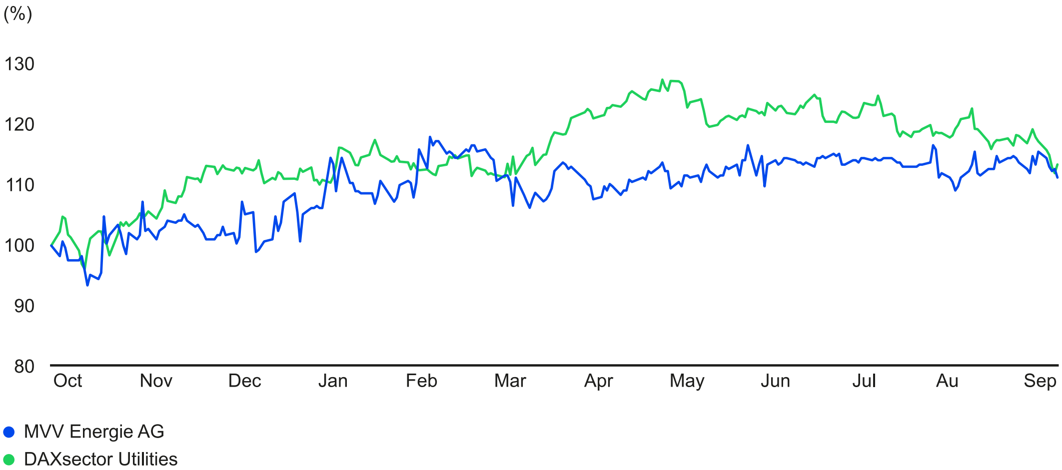
10 Subject to approval by Annual General Meeting on 8 March 2024

MVV's share

Share price rises

The MVV Energie AG share was listed at Euro 31.00 at 30 September 2023, corresponding to a 7.6 % increase compared with Euro 28.80 at 30 September 2022. Including the dividend of Euro 1.05 per share distributed in March 2023, our share price rose year-on-year by 11.3 %. The DAXsector Utilities, the comparative index for the energy industry, gained 13.5 % over the same period. Consistent with the calculation of the comparative index, we include our dividend payment in the share price performance comparison chart.

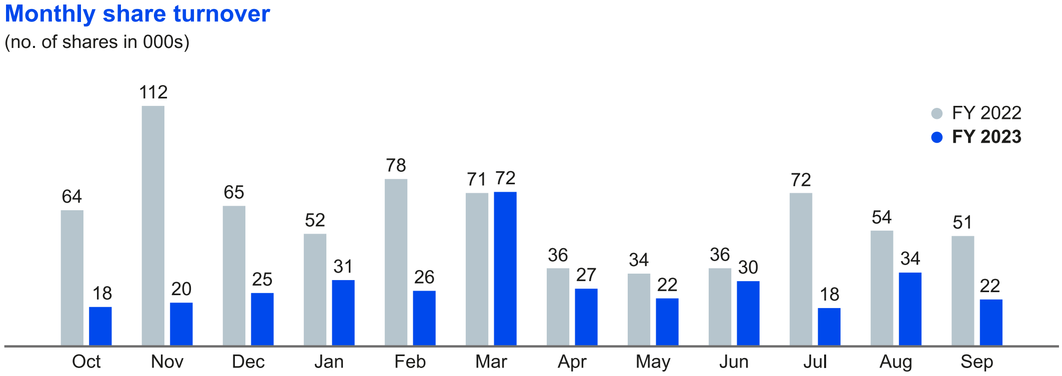
MVV Energie AG share price performance comparison FY 2023



Higher market capitalisation and lower trading volumes

The positive performance of our share price led to a higher market capitalisation. This rose from Euro 1,898 million at the previous year's balance sheet date to Euro 2,043 million at 30 September 2023. The 4.8 % free float thus accounted for market capitalisation of around Euro 98 million (previous year: Euro 91 million). Around 0.3 million MVV Energie AG shares were traded in total on all German marketplaces in the 2023 financial year, 52.7 % less than in the previous year. The equivalent value of trading volumes therefore also decreased, in this case to Euro 11 million (previous year: Euro 24 million).

Monthly share turnover



Higher regular dividend and payment of a special dividend

The Annual General Meeting on 10 March 2023 accepted the proposal from the Executive and Supervisory Boards and approved the distribution of an unchanged dividend of Euro 1.05 per share for the 2022 financial year. Based on 65.9 million shares in circulation, the distribution sum totalled Euro 69.2 million (previous year: Euro 69.2 million).

Given the earnings growth in the 2023 financial year, the Executive Board has decided to propose a regular dividend of Euro 1.15 per share, corresponding to an increase of Euro 0.10 per share, for approval by the Annual General Meeting on 8 March 2024. This corresponds to a dividend yield of 3.7 % based on the closing price of MVV's share in XETRA trading on the balance sheet date on 30 September 2023. Furthermore, a one-off dividend is to be distributed to mark the 150th anniversary of MVV and its predecessor companies. In view of the earnings performance, it is proposed that this should amount to Euro 0.30 per share.

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 amount 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

We continued our dialogue with institutional and retail investors in the year under report and focused in particular on explaining our #climatepositive course and our operating performance in the 2023 financial year. Our investor relations team is always available for questions and suggestions from our shareholders. The Executive Board commented on our company's latest business performance at analysts' conferences held upon the publication of our half-year and full-year results. We publish recordings of analysts' conferences and the accompanying presentations on our website at **mvv.de/en/investors.**

Currently, the MVV Energie AG share is covered by one financial institution: Landesbank Baden-Württemberg. As of 30 September 2023, it recommended buying our share with a target price of Euro 36.20.

Combined Management Report

Contents

Disclosures made in italics in the Combined Management Report constitute other information for which the company's executive directors are responsible. The contents of these disclosures were not subject to any audit by the auditor.

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 companies which form part of the Group and also has its own operations. Including MVV Energie AG, the MVV Group comprises 112 fully consolidated companies and 30 companies which are consolidated using the equity method (at-equity companies). Our group of companies has its largest locations in Mannheim, Kiel, Offenbach and Wörrstadt in Germany and in Plymouth and Dundee in the United Kingdom. An overview of all shareholdings, and thus of all countries in which we are present, can be found in the chapter MVV's Shareholdings.

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 comprises the companies of Köthen Energie and the MVV Energie CZ Group, as well as the at-equity results of selected shareholdings in municipal utility companies. We sold the MVV Energie CZ Group and our shares in Stadtwerke Ingolstadt in the year under report. These shareholdings are included in the Strategic Investments segment through to their respective deconsolidation dates.

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 on behalf of MVV.

Reporting Segments and business fields

Reporting segments	**Customer Solutions**	**New Energies**	**Supply Reliability**	**Strategic Investments**	**Other Activities**
Business fields	Retail	Environmental Energy	Combined Heat and Power	Strategic Investments	Shared Services
	Business	Wind/ Biomethane	Grids		Cross-Divisional Functions
	Commodities	Project Development			

Business Model

We cover all key stages of the energy industry value chain: We generate and trade with energy, distribute energy via proprietary grid companies and market energy solutions to various customer groups. We also have water production and distribution activities. One particular focus is on renewable energies, where we are active in the fields of project development for wind turbines and photovoltaics systems, operations management for windfarms and solar parks, as well as for biomass plants. Furthermore, we also have plants of these kinds in our own generation portfolio. We market the electricity from these plants, as well as from third-party plants, via power purchase agreements (PPA) and power sale agreements (PSA).

Customer Solutions segment

The Customer Solutions reporting segment includes the energy and water retail and wholesale businesses. For retail, commercial and business customers, we have a broad range of products and services that meet ecological standards – from renewable energies through to environmentally friendly district heat. This also includes the portfolio of solutions we offer for self-generated photovoltaics electricity, heat pumps and e-mobility. In addition, e-mobility is an integral aspect of our activities in Smart Cities, where we act as a system partner to local authorities and offer networked solutions for towns and cities, as well as suitable services to support them in decarbonising their activities. Our solutions for business customers focus on projects and measures to enhance efficiency and decarbonise operations at industrial, retail and real estate customers. Moreover, the Customer Solutions segment also includes the commodities, service and trading business at MVV Trading. Here, we pool energy procurement, energy product trading, marketing electricity from renewable generation, also via direct marketing and PPA/PSA models, and portfolio management for our group of companies. We also offer these services to third-party customers on the market.

New Energies segment

We pool our competence in making ecological use of waste and biomass in the New Energies reporting segment. 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 a further energy from waste plant in the Scottish city of Dundee. In Germany, we have biogas and biomethane plants, including bio-waste anaerobic digestion. Furthermore, the New Energies segment includes proprietary wind turbines and photovoltaics systems, as well as our national and international project development business. Here, we focus on onshore wind power in Germany and on photovoltaics. In addition, we act as operations managers for windfarms and solar parks and develop hybrid projects in which, depending on requirements, we supplement various energy generation systems with storage units and manage these using smart measurement and control technology.

Supply Reliability segment

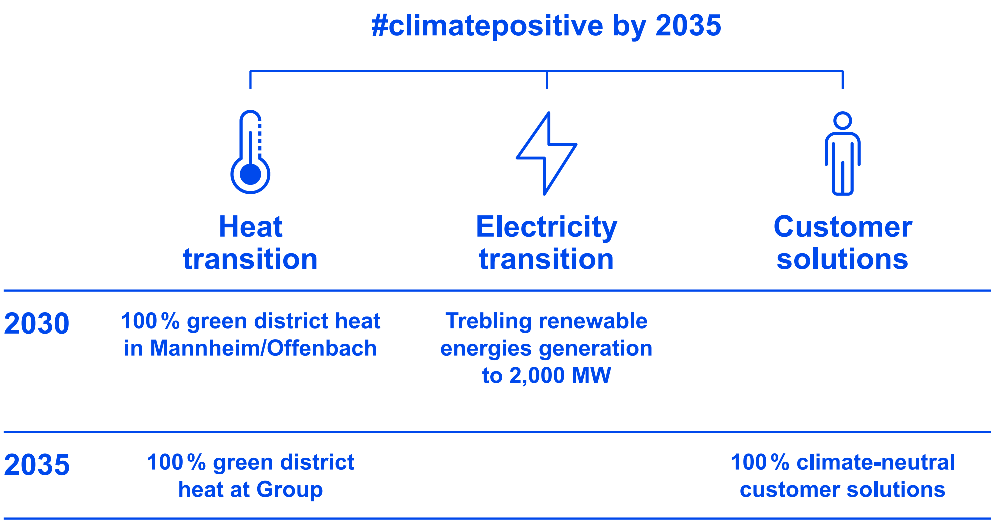
The Supply Reliability reporting segment comprises our generation portfolio for conventional energies with CHP. These include our coastal power plant in Kiel, our CHP plant in Offenbach and our minority shareholding in the power plant Grosskraftwerk Mannheim AG. High-performing grids are crucial to guarantee a reliable supply of energy and water and implement the energy transition. For this reason, this segment also includes the grid businesses 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 19,000 kilometres.

Corporate Strategy

Climate protection is a fixed component of our corporate strategy
MVV has been working on the energy system of the future for many years now. The energy supply has to be climate friendly and environmentally friendly, while also being reliable and affordable. With our corporate strategy, we acted early to prepare our company to actively shape this transformation. Our climate protection strategy is a fixed component of our corporate strategy and largely determines the allocation of our investments and MVV's further development. We base this strategy on the findings of climate science, such as the statement issued by the German Advisory Council on the Environment (SRU) in June 2022, or the Synthesis Report of the Sixth IPCC Status Report dated July 2023. The German energy industry will have to become virtually free of emissions within the next 15 to 20 years. This means that, rather than using fossil fuels, we will have to execute a full transition to renewable energies. That applies not only to our core business, but also to our upstream and downstream value chains and to companies we recognise at equity. We have underpinned our climate protection strategy with sustainability and decarbonisation targets.

Our sustainability and decarbonisation targets were already certified on several occasions in 2021 by the Science Based Target initiative (SBTi). In 2021, MVV was the first German energy company to obtain confirmation that it was pursuing a scientific 1.5-degree trajectory. In autumn 2022, MVV was the first energy company in Germany, and only the third worldwide, to be validated in accordance with the new, even stricter standard. This confirmed that, in addition to our medium and long-term sustainability and decarbonisation targets, the associated measures also satisfied the strictest scientific standards. As a result, MVV was recognised as being net-zero compatible.

Moving faster to the future
We are convinced that an accelerated 1.5-degree trajectory is not only possible in technical terms, but also economically viable. Building on this conviction, we used the 2023 financial year to review the long-term sustainability and decarbonisation targets we had already set ourselves in the 2016 and 2020 financial years and concluded that we would raise them further as presented below.



We are reducing our total CO_2 footprint to net zero and will be #climatepositive by 2035
We consistently include all sources of greenhouse gases in our climate balance sheet, i.e. we also include sources in the upstream and downstream supply chains and at the companies we recognise at equity. To reach our net-zero target, we will fully convert our energy generation to renewable energies. Furthermore, by 2035 at the latest we will supply our customers exclusively with heat, electricity and gas from renewable energies and decarbonise our supply chains.

MVV will become #climatepositive as a company by 2035, five years earlier than previously planned. To achieve negative overall emissions and thus become #climatepositive, we will actively remove CO_2 from the atmosphere and permanently capture, use or store this. To this end, we are consistently upholding our existing climate protection activities and pursuing an even more ambitious pathway to expand BECCUS (Bioenergy Carbon Capture Usage and Storage). In this context, we will upgrade the technology at our biomass CHP plants and energy from waste plants to enable to them to permanently remove not only fossil-based CO_2 but also biogenic, i.e. already climate-neutral, CO_2 from the atmosphere. This way, MVV will offset its own unavoidable residual emissions and, thanks to the additional volumes removed, become #climatepositive.

We have already successfully implemented the first steps. In Mannheim, we are currently testing the capture, liquefaction and loading of CO_2 with a pilot plant. In Dresden, we have created the first climate-positive facility at our bio-waste anaerobic digestion plant. Before the end of this decade, we will equip our other bio-waste anaerobic digestion and biomethane plants with BECCUS. Our biomass and energy from waste plants are set to follow in the subsequent decade. Further information about this can be found in the section Environmental Concerns Aspect.

The Mannheim Model: our course to the future
The Mannheim Model, on which we are working at all our locations, provides the guiding framework for our #climatepositive course.

We are implementing the heat transition

MVV supports local authorities in planning the heat transition. Together with our partners, we are shaping the heat transition on location. And we are securing the reliable supply of climate-neutral heat for all district heat customers. We acted early to start making district heat gradually green and will not build any new (CHP) power plants fired by fossil natural gas for the general public supply, i.e. of electricity and district heat. In Mannheim and the region, as well as in Offenbach, we are fully converting our district heat to 100 % green energy sources in the current decade. By 2035, we will reach 100 % green district heat generation in the whole of the Group, including Kiel. To achieve this, we are relying on a broad-based generation portfolio.

Thanks to the measures already implemented in recent years, green energy sources currently account for up to 30 % of our district heat generation for Mannheim and the region. We launched operations with our first river heat pump in October 2023 and our biomass CHP plant in Mannheim is scheduled to be connected to the district heat grid in 2024. In addition, we will further develop green heat generation by drawing on heat from deep geothermal energy. Energieversorgung Offenbach will replace the existing hard-coal-fired CHP plant by drawing on alternative generation sources, such as river or data centre heat pumps, biomass and biomethane, power-to-heat and optimised use of its energy from waste plant. This way, it will convert its district heat to 100 % green generation by 2030. On its “Course to Climate Neutrality” by 2035, Stadtwerke Kiel will deploy instruments including large-scale heat pumps and geothermal energy and convert the coastal power plant to 100 % hydrogen. At the same time, we are continually investigating further alternatives for all our locations, such as combined heat and power generation based on climate-neutral gases, additional large-scale heat pumps and industrial waste heat.

The heat transition will succeed together with our customers. We intend to make it possible for everyone living at our locations in Mannheim, Kiel and Offenbach to convert their heat supply to climate-friendly alternatives. To this end, we are increasing the density of and expanding our district heat grids, transforming gas grids, eliminating parallel grid structures where possible and strengthening electricity grids to satisfy the growing volume of demand, especially for heat pumps and e-mobility. We will further expand the district heat grid in Mannheim in particular by 2035. “Pathways to Climate Neutrality”, the integrated energy framework concept compiled for Mannheim by the Wuppertal Institute in March 2021, shows that more than 60 % of households in Mannheim are supplied with district heat, as are industrial and commercial customers. According to the “How Does Germany Heat Itself in 2019?” study published by the German Association of Energy and Water Industries (BDEW) in October 2019, this figure places Mannheim far ahead of the national average of just under 14 %. We will further increase the already high share of district heat. In those streets supplied by district heating, we intend to discontinue grid-based gas supplies by 2035. For those households that cannot be connected to district heat, we are offering decarbonisation options with decentralised solutions such as heat pumps or biomass heat systems.

We also offer climate-neutral heat solutions to those of our customers who live in areas not supplied with district heat. Here, we are expanding the range of information available on heat pumps and other decentralised solutions in order to exploit market potential and support our customers in implementing their own heat transitions. We are additionally extending the share of the value chain that we cover by forming partnerships with heat pump manufacturers and trade firms. We also intend to further extend the share of the value chain we cover with our own activities in the grid business as well. This way, we aim to safeguard implementation of the heat transition while simultaneously boosting our services business.

We are accelerating the electricity transition
To implement the electricity transition, we have been expanding our proprietary renewables-based generation capacities for many years now. Our focus is on onshore wind power and photovoltaics. We will further accelerate our existing pace of adding new capacities and increase our installed renewable energies generation capacities to 2,000 MW by 2030. This mean tripling our capacities compared with the 2022 financial year.

To enable us to reach this target, we will in future retain growing numbers of domestic wind and photovoltaics projects developed by Juwi within the Group in future. In the years ahead, we will also increasingly replace existing wind turbines with new, higher-performance turbines (repowering). Moreover, together with joint venture partners Stadtwerke Kiel will invest in renewable energies and accelerate the expansion in renewable energies in Schleswig-Holstein. This way, we will achieve 100 % green electricity generation at the Group by 2035.

We are further expanding our climate neutrality solutions for 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 intend to support our customers in achieving their own climate neutrality. We will therefore gradually convert our products and services to 100 % climate-neutral solutions by 2035. We already have a full range of products and services available to supply green energy.

We take a holistic view of the transformation in the electricity and heat supply and aim to provide our customers with implementation solutions from a single source. For MVV, decarbonisation offers additional growth opportunities that we will seize by providing green products and services while also accounting for market and technical innovations. We report on our latest innovative projects in the chapter Technology and Innovation. Our range of services addresses the needs of diverse customer groups. For business customers, our approach covers the portfolio of solutions offered by MVV Enamic. In the coming years, MVV Enamic will increasingly dovetail its sales and other processes, including data centre activities and the use of waste heat, and shape its development by efficiently managing and scaling its solutions. For local authorities and municipal utility companies, we offer solutions from our smart cities business. These are intended to promote intelligent urban development and support authorities in decarbonising their activities. Furthermore, together with our Beegy subsidiary we offer products for decentralised energy solutions in retail and business customer sales from a single source, including installation and service, and are thus generating nationwide growth both within and outside our own regions. To this end, we secure proprietary installation and service capacities and cooperate with trade firms and installation partners. Our range of services is complemented by wholesale-based marketing solutions focusing on renewable energies and commodity services for municipal utility companies, renewable energies investors and large-scale industry offered by our subsidiary MVV Trading.

In the coming years, we will invest a total of around Euro 7 billion in the energy transition, and thus in our #climatepositive future

To implement the Mannheim Model and reach our targets, we have initiated the largest growth programme in our company's history. In the decade to 2033, we will invest around Euro 7 billion in the energy system of the future.

Our growth programme, which is broad based and has a long-term horizon, will raise MVV to a new level. It will have a sustainably positive impact on our earnings performance. Here, we will make broadly diversified investments and this way enhance, transform and expand our business while developing innovations.

With our employees we are upholding our fitness for the future

Our future is #climatepositive – and our workforce of around 6,400 employees works each day to implement this goal. In this, we are convinced that diversity enhances our success. After all, diverse teams are better able to understand customers' needs, for example, and to work more creatively on innovative ideas. We have made progress with our "Energy for Diversity" programme and also launched our group diversity strategy in the 2023 financial year. We are noticing that, due to the demographic transformation and changes in the labour market, it is becoming increasingly challenging to find suitable employees. We are actively countering this shortage of specialists by stepping up our recruiting activities and expanding our range of internal training programmes. One key success factor that will assist us in achieving our targets is also a new world of work: more dynamic, more flexible and more mobile. Examples here are our mobile work provisions, desk-sharing concepts and hybrid work in teams based on new technical options. Further information about this can be found in the section Employee Concerns Aspect.

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 departments. Here, innovation managers and market researchers work together with employees from our operating business fields on research and development projects, as well as on specific projects aimed at increasing customer satisfaction. Moreover, our operating units 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

We are actively promoting climate-friendly hydrogen technologies
In July 2023, the Federal Government updated its National Hydrogen Strategy. Further information about this can be found in the chapter Business Framework. Against this backdrop, we are well positioned with our strategic alignment as regards hydrogen. In the coming years, our focus will be on building expertise by implementing pilot projects. We will secure the hydrogen-readiness of our grids, i.e. their suitability for future use with hydrogen, in the early 2030s and subsequently safeguard our generation and backup facilities for district heat, particularly in Kiel.

In our "Hydrogen Programme", we have established an interdisciplinary MVV team within the Group. This ensures joint cross-departmental cooperation for hydrogen enquiries and secures the transfer of expertise to individual units. We began work in the 2022 financial year already on planning an electrolyser in the Stassfurt Energy Region. With a capacity of 36 MW, the associated windfarm has already received preliminary approval, while the application for the electrolyser was submitted in the year under report. We expect to receive approval for the electrolyser in the 2024 financial year.

In a further project, our Juwi subsidiary developed a green hydrogen supply concept in the context of a feasibility study conducted together with a Mannheim-based industrial company. Moreover, we are involved in several consulting projects at business customers and municipal utility companies.

Digital Twin developed as guide for heat transition
Together with a partner, we have further developed the Digital Twin for the heat market in Mannheim. We use this as a central analytical and planning tool and see great potential for spreading solutions of this kind in Germany. This way, we are able not only to press ahead with internal company planning and implementation, but also act as a competent partner to local authorities, advise them on municipal heat plans and implement these based on optimal heating solutions for our customers.

As well as factoring in all significant stakeholders, such as local authorities, local populations and heat providers, the Digital Twin also accounts for networked systems to expand renewable energies, develop grid infrastructures or ramp up e-mobility charging infrastructures. Furthermore, the solution considers a variety of scenarios in order to model robust development pathways.

EU project NUDGE: using incentives to achieve greater energy efficiency
NUDGE, a three-year research project subsidised by the EU, was completed at the end of August 2023. This project involved developing and testing non-monetary incentives, known as “nudges”, for reducing private energy consumption and optimising own use of proprietary solar electricity. NUDGE comprises five pilot projects across Europe, each with a different focus. A total of 111 MVV customers from Mannheim and the region took part in the German pilot project.

All pilot households already had their own photovoltaics systems at the beginning of the practical trial, while most also had battery storage. In addition, more than half of the pilot households acquired an electric car and installed charging stations during the term of the project.

In three stages, the participants had the opportunity to use select functions on the web portal and charging app. They also received explanations of their own consumption patterns, were given specific tips as to how to raise the share of solar electricity they use themselves and were provided with an automated control function for surplus charging.

The Fraunhofer Institute for Systems and Innovation Research ISI accompanied all stages of the project in a scientific capacity. The scientific evaluation of the findings will be completed by the end of 2023.

Analysis of the energy data reveals an overall reduction in household electricity consumption. The findings also show a positive impact on proprietary consumption and energy independence. The use of automated surplus charging at customers with electric cars led to a 16 %, and thus significant, increase in the level of proprietary electricity consumption.

The experience gained and findings of the pilot projects will be used to derive proposals as to how non-monetary incentives should be structured and deployed in future. These will be submitted to the EU Commission as the sponsor of the project.

Innovation processes

Award for ideas management – German Ideas Management Prize 2023
Our ideas management programme is intended to actively involve our employees in the continuous improvement process and raise their awareness of permanent change.

Thanks to a one-off campaign jointly organised by our ideas management and our organisation and process management functions, in the year under report we received numerous new proposals for solutions to optimise our processes in keeping with our corporate strategy. We assessed a total of 428 proposals in the 2023 financial year. By implementing these ideas, we achieved savings of Euro 195 thousand in the first year alone. We distributed bonuses of Euro 55 thousand to the relevant employees. The multiyear benefit (four years) of the proposals implemented in the year under report currently amounts to Euro 262 thousand.

The German Ideas Management Prize promotes ideas management in German-speaking countries and is awarded to companies and individuals who act as role models when it comes to managing ideas. In this category, MVV was ranked 2nd in 2023.

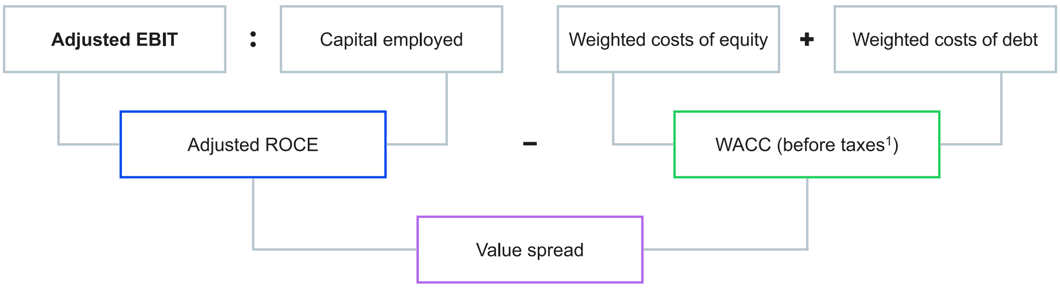
Take-Off – our internal innovation process
In “Take-Off”, our internal innovation process, all employees at our Mannheim location were able to contribute their ideas for new business models. MVV supported the submission of ideas by offering a range of workshops and training sessions. Based on all ideas submitted, MVV’s “InnoBoard”, a group of select employees, then chose the ten most promising candidates for the next stages. These were presented to the workforce at the company’s “InnoDay”. In the next stages, colleagues are now working to further develop the most promising projects on an interdisciplinary basis. The Executive Board will decide which ideas should actually be implemented. This way, we are making targeted efforts to extend our portfolio of services and products in line with the corporate strategy.

Value-Based Corporate Management

The objectives of our value-based corporate management are to sustainably increase MVV's value and to offer an attractive dividend to our shareholders. We achieve this by generating a positive value spread, i.e. by ensuring that the return on average capital employed (adjusted ROCE) is higher than our 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. We add interest income from finance leases, which is reported in the financing income line item in the income statement, 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.

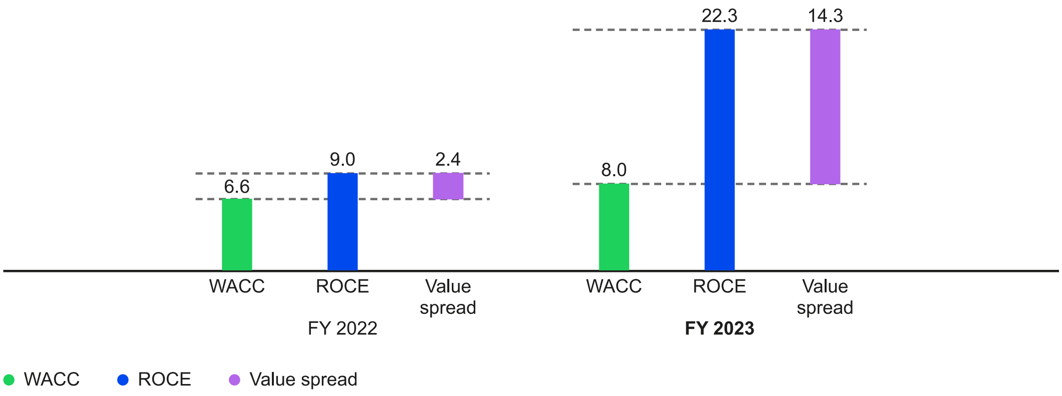
This resulted in a Group WACC of 8.0 % before taxes for the 2023 financial year (previous year: 6.6 %). The calculation of costs of capital was based on the methods promulgated by the Institute of Public Auditors in Germany (IDW) and is thus consistent with the relevant auditors' standard.

The ROCE rose from 16.2 % to 33.5 % in the 2023 financial year. The principal driver for this increase was adjusted EBIT which, mainly due to exceptional developments in the Commodities business field and disposal gains, rose significantly in the 2023 financial year (chapter Presentation of Earnings Performance). Following the subtraction of WACC before taxes of 8.0 %, the increase in ROCE led the value spread to rise to 25.5 % in the year under report. In the previous year, this key figure stood at 9.6 %.

From an operating perspective, i.e. excluding disposal gains and excluding the high volume of inflows and outflows of security deposits for counterparty default risk (margins), which impacted on the development in liquid funds, the ROCE amounted to 22.3 % in the 2023 financial year (previous year: 9.0 %). Liquid funds, which increased in the previous year and decreased in the year under report (chapter Presentation of Financial Position), directly influence the level of capital employed, as half of liquid funds are accounted for in the calculation of average capital employed.

Key value management figures excluding disposal gains and excluding margins

%



Group Business Performance

- Disposal gains from sale of shareholdings
- Operative adjusted EBIT influenced by exceptional performance in marketing renewable energies and trading
- Ongoing high volume of investment

Material developments

Investments in sustainable profitable growth
Our investment programme, which is broad based and has a long-term perspective, is a firm component of our Corporate Strategy and is the basis for achieving our target of becoming #climatepositive by 2035. We invested Euro 344 million in the 2023 financial year, which again exceeded the previous year's figure (Euro 335 million) and marked our highest volume of investment in the past eight years. To make a reality of the heat transition, implement the electricity transition and expand our climate neutrality solutions for customers, we will significantly step up our pace of investment in the years ahead and make around Euro 7 billion available for this transformation in the decade until 2033.

In the year under report, we pressed ahead above all with expanding green heat in Mannheim. That is because we have set ourselves the target of converting the district heat supply for Mannheim and the region to 100 % green energy sources by 2030 at the latest. We launched operations with our first river heat pump at the beginning of the current 2023/24 heating period. With a heat generation capacity of 20 MW_t, this draws on environmental heat in the Rhine to supply heat to an arithmetic total of around 3,500 households. Moreover, in Mannheim we are completing construction work on plants to provide backup and peak load cover for our district heat supply. We will be able to deploy these from the 2024 financial year. At our location on Friesenheimer Insel, our phosphorous recycling plant, which will enable the phosphorous contained in sewage sludge to be recovered for use in fertiliser production, is in the final stages of construction. In Dresden, we have implemented our first #climatepositive plant. Our bio-waste anaerobic digestion plant there is now permanently removing CO_2 from the atmosphere. We use part of the CO_2 captured during biomethane production for processes within the plant. The excess volume of liquified CO_2 is permanently stored in demolition concrete.

We also made further progress in expanding our proprietary renewable energies generation portfolio, and that despite the capacities retired from our portfolio in connection with the disposal of shareholdings. At the end of the year under report, our renewable energies electricity generation capacity stood at 633 MW, 19 MW higher than in the previous year. This figure is set to rise to 2,000 MW by 2030. We have thus further significantly raised our existing target ambition, which previously stood at 800 MW by 2026.

Strong earnings growth
The earnings performance in the year under report was shaped on the one hand by the disposal gains generated from the sale of our Czech subsidiary MVV Energie CZ Group and of our shares in Stadtwerke Ingolstadt.

On the other hand, our operative adjusted EBIT particularly benefited from the exceptional performance of the Commodities business field. Here, our energy trading systematically expanded the marketing and management of renewable energies while maintaining a conservative approach to risk management. Moreover, we generated significant additional revenues by exploiting price volatilities in our trading activities with renewable energies. At the same time, we also achieved earnings growth in our portfolio management activities for conventional energy trading.

On an operating level, i.e. excluding disposal gains of Euro 133 million, our adjusted EBIT rose to Euro 747 million in the year under report (previous year: Euro 298 million). Including disposal gains, we generated earnings of Euro 880 million, an absolute record for MVV.

Pre-tax earnings (adjusted EBIT) increased year-on-year by Euro 508 million to Euro 829 million. This increase is also reflected in adjusted annual net income after minority interests, which rose by Euro 337 million and came to Euro 513 million in the year under report. Adjusted earnings per share amounted to Euro 7.78 (previous year: Euro 2.67).

150 years of MVV – special payments to shareholders and employees
The history of MVV and its predecessor companies began 150 years ago. We can look back on a successful development in the years since then. To mark our 150th anniversary and in view of our strong operating earnings performance in the 2023 financial year, the Executive Board is proposing a one-off dividend of Euro 0.30 per share – in addition to the regular dividend, which should rise from Euro 1.05 to Euro 1.15 per share – for approval by the Annual General Meeting. Furthermore, the Executive Board has decided to make a one-off payment of Euro 1,500 to the company’s employees (based on full-time activity). At the same time, we will be retaining surplus profits to enable us to implement the investments required in the years ahead for us to meet our target of becoming #climatepositive by 2035.

Overall summary

The environment in which we operated in the 2023 financial year was once again very challenging both for the energy industry and in terms of energy policy. The energy trading and procurement markets remained highly volatile. Despite these difficult conditions, we can look back on a very successful financial year.

At Euro 747 million, our adjusted EBIT excluding disposal gains was ahead of the range of between Euro 650 million and Euro 720 million which we forecast at the end of the first half of the year. In our 9-month reporting, we referred to this possibility should energy markets stabilise in the remainder of the 2023 financial year and no setbacks arise due to macroeconomic factors.

Our operating performance in the 2023 financial year documents that, with our strategic alignment towards climate protection and our broad-based business portfolio, we are well positioned to generate sustainable and profitable growth.

Comparison of Expected and Actual Business Performance and Outlook

Comparison of expected and actual business performance and outlook

	Forecast FY 2023	Results FY 2023	Outlook FY 2024
Adjusted EBIT	Start of FY 2023: Adjusted EBIT excluding disposal gains at least at previous year's level (Euro 298 million); forecast raised after end of second quarter: inclusion of substantial additional revenues from renewable energies trading and earnings growth in conventional energy trading; including these items, adjusted EBIT excluding disposal gains set to range between Euro 650 million and Euro 720 million; announcement upon end of third quarter that, should energy markets stabilise further and no macroeconomic setbacks arise, adjusted EBIT excluding disposal gains may also exceed the forecast range	Adjusted EBIT of Euro 747 million excluding disposal gains	Adjusted EBIT of between Euro 360 million and Euro 440 million excluding disposal gains, i.e. within +/– 10 % of Euro 400 million; in general dependent on macroeconomic climate, 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 39.7 % (40.7 % excluding security deposits for counterparty default risk (margins))	Target > 30 %
Adjusted ROCE	At around previous year's level (9.0 %) excluding security deposits for counterparty default risk (margins)	Adjusted ROCE of 22.3 % excluding security deposits for counterparty default risk (margins) and excluding disposal gains	Significantly below previous year's level (excluding security deposits for counterparty default risk (margins) and excluding disposal gains)
Investments	At around previous year's level (Euro 335 million)	Total investments of Euro 344 million	Significantly above previous year's level
Employees	Increase in personnel totals in growth fields; further efficiency measures in existing business	Reduction in personnel totals to 6,390 employees at 30 September 2023 (previous year: 6,566) due to disposal of shareholdings; this factor countered by increase in personnel totals in organic growth fields	Increase in personnel totals in growth fields; further efficiency measures in existing business

Business Framework

Energy policy developments

Federal Government aims to accelerate renewable energies expansion
With its so-called “Easter Package”, in summer 2022 the Federal Government adopted its first major legislative package to accelerate the expansion in renewable energies. It includes amendments to numerous energy laws, of which some important changes took effect in 2023, and focuses above all on speeding up the expansion of renewable electricity generation. Tender volumes for electricity generation from renewable sources, for example, were raised significantly, while an improved framework was created for photovoltaics (PV) systems and wind turbines.

If the targets for generating electricity from renewable energies are to be met, their expansion will have to be significantly accelerated. To achieve this, in the middle of 2023 the Federal Ministry for Economic Affairs and Climate Action (BMWK) adopted a PV strategy and an onshore wind strategy. The measures presented for onshore wind power are intended above all to significantly speed up approval processes. The PV strategy sketches numerous proposals to boost the installation of PV systems across the whole segment – from large ground-mounted PV systems to rooftop PV to balcony PV. An initial legislative package to implement the PV strategy is scheduled to be adopted before the end of 2023.

Managing the energy crisis with energy price caps and windfall taxes
To protect consumers from the negative impact of the energy crisis, at the end of 2022 the Federal Parliament and Federal Council adopted extensive aid packages. In addition to one-off relief for December 2022, lawmakers approved energy price caps for electricity, gas and heat with assistance lasting at least until the end of 2023. These form a key part of the economic shield with a volume totalling Euro 200 billion.

The relief provided in the form of the electricity cap was to be partly refinanced by imposing a windfall tax on excess revenues in the electricity market from December 2022. The basis for this is provided by an EU Regulation. This instrument expired at the end of June 2023 and the Federal Government has not drawn on the option to extend it.

These legislative decisions to manage the crisis meant that extensive and complex tasks were assigned to us as an electricity generator, energy supplier and distribution grid operator. We were directly affected by the windfall tax at our proprietary electricity generation plants. The same applies for our activities in the segment of green power purchase agreements (PPAs).

Update of National Hydrogen Strategy and plans for core hydrogen grid
The Federal Government updated its National Hydrogen Strategy in July 2023. Among other measures, the target set for domestic electrolysis capacity in 2030 was doubled from 5 GW to 10 GW. In addition to domestic production, large volumes of hydrogen are due to be imported. Details of this are to be stipulated in an import strategy to be presented before the end of 2023. Moreover, consultations have been held on plans for a core hydrogen grid. Among other areas, hydrogen plays a role in the power plant strategy, particularly for storing electricity and as a fuel at those power plants which secure the electricity system at times of low feed-in volumes from renewable energies.

Political tug-of-war over the heat transition
A regulatory and legal framework is now emerging in the political debate surrounding the heat transition. Laws governing both municipal heat plans (German Heat Planning Act (WPG)) and requirements for individual buildings (German Building Energy Act (GEG)) are scheduled to take effect on 1 January 2024. These requirements will have to be structured in such a way as to provide a solid foundation for both suppliers and grid operators on the one hand and building owners on the other to plan their investments. Based on the current status, district heat will be firmed up as a central heat supply option in large built-up areas. This underlines our strategic position in the heat transition. At the same time, the decision largely not to restrict technologies means that our customers can select the heat option at MVV that best meets their needs.

The first District Heat Summit held by the Federal Government and relevant industry associations in June 2023 underlines the importance which the Federal Government attaches to this topic. The summit agreed that three joint workgroups on the Heat Supply Ordinance, on prices and transparency and on approval processes would look into solutions for the most important topics relating to district heat. The results are due to be presented and adopted at a second summit at the beginning of 2024.

One consequence of the fossil fuel exit is the need to redefine the role of natural gas grids. Depending on municipal heat plans, gas distribution grids will be rededicated for distributing hydrogen or green gases or decommissioned due to the use of other heat options, such as district heat or heat pumps. To date, there is no legal or regulatory framework for this transformation, a factor that is creating uncertainty among local authorities, local populations and grid operators. In a study published in June 2023, we pointed to the absence of this framework and recommended how it might be structured. This study is available online at **mvv.de/gasnetzstudie.**

EU stipulates new targets for renewable energies and energy savings
In March 2023, the European Commission, European Parliament and European Council reached agreement on the contents of two core elements of the “Fit for 55” package. On the one hand, a comprehensively redesigned version of the EU’s Renewable Energy Directive (RED III) can take effect. This raises the European target for renewable energies by 2030 from 32.5 % to 45 % and sets out binding targets for individual sectors. On the other hand, the European institutions adopted the revision of the Energy Efficiency Directive (EED). This sets a binding target that energy consumption in the EU must be reduced by 11.7 % by 2030 compared with the projections in the 2020 EU reference scenario. This reduction is to be achieved by investing in the public sector, promoting district heat and cooling and setting annual targets for each member state. For MVV, this new framework harbours opportunities for district heat in particular, which is set to play a central role in future in the heat transition across Europe.

Strengthening the independence of the BNetzA
In May 2023, the Federal Government presented an amendment to the German Energy Industry Act (EnWG) to implement the ruling by the European Court of Justice concerning the independence of the Federal Network Agency (BNetzA). This envisages granting significantly more extensive powers to the authority in future when it comes to regulating grid fees. Rather than the Federal Ministry for Economic Affairs and Climate Action (BMWK), the BNetzA would therefore be responsible for this area in future.

German Act to Restart the Digitisation of the Energy Transition (GNDEW) takes effect
The GNDEW entered effect in May 2023. This legislation chiefly regulates the rollout of smart metering systems, including rollout obligations and deadlines, and sets price caps for standard and extra services. This will provide the rollout with greater legal security and accelerate the process. In particular, the rollout will in future no longer depend on the so-called market declaration by the German Federal Office for Information Security (BSI). We welcome this move. With regard to price caps, the participation of grid operators is now envisaged. Recognition of these costs in the context of incentive regulation is still uncertain given the ECJ ruling on the independence of Germany's regulatory authorities. We are calling for the recognition clearly intended by lawmakers to be implemented in regulatory practice.

BGH confirms electricity Xgen for 3rd regulatory period
At the end of June 2023, Germany's Federal Court of Justice (BGH) announced its decision concerning the general sectoral productivity factor (Xgen) for electricity in the 3rd regulatory period. In response to the appeal filed by the Federal Network Agency (BNetzA), the ruling of the Higher Regional Court (OLG) in Düsseldorf from March 2022 was annulled and the appeals field by grid operators rejected. The rationale for the decision is currently not yet available. The stipulation made by the BNetzA in November 2018 was thus confirmed. In terms of incentive regulation, this set an Xgen of 0.90 % for electricity supply grid operators in the third regulatory period. This factor reduces the permissible revenue cap due to assumed advances in the productivity of grid operations compared with overall economy. This aspect is countered by inflation.

OLG Düsseldorf annuls equity return rates for 4th regulatory period
At the end of August 2023, the Higher Regional Court (OLG) in Düsseldorf responded to the petition filed by numerous grid operators and annulled the equity return rates set by the Federal Network Agency (BNetzA) in October 2021. For the 4th regulatory period, which starts in 2023 for gas grid operators and in 2024 for electricity grid operators, the BNetzA had set the return at 5.07 % for new systems and 3.51 % for existing systems. Considering all circumstances of the individual case, the calculation of the market risk premium using a single method was not appropriate to ensure that the resultant equity return was appropriate, competitive and risk adjusted. The BNetzA should have subject the market risk premium, which it determined solely by reference to historic datasets, to further protections and certainly to supplementary plausibility checks. Grid operators had particularly criticised the fact that the market risk premium proposed by the BNetzA was very low compared with other European countries. They also saw this as posing a threat to the performance and investment capability of grid operators, and thus to the success of the energy transition. The court decisions are not legally binding. The BNetzA has filed an appeal to the Federal Court of Justice (BGH). In the intervening period, the BNetzA has submitted key points for consultation which stipulate the way in which the imputed equity return for new systems is determined based on cost of capital plus a premium. This acknowledges the need to rescale grid investment conditions in the short term given the challenges presented by the energy transition and the current interest rate climate. We welcome this. When determining the cost of capital premium for the 4th regulatory period (until 31 December 2027), the key points – unlike the existing requirement – permit short-term price adjustments and provide for setting the equity return for new investments from 1 January 2024 on the basis of a variable annual basic return plus a constant appropriate risk premium. The extent to which this leads to significant improvements for distribution grid operators remains to be seen.

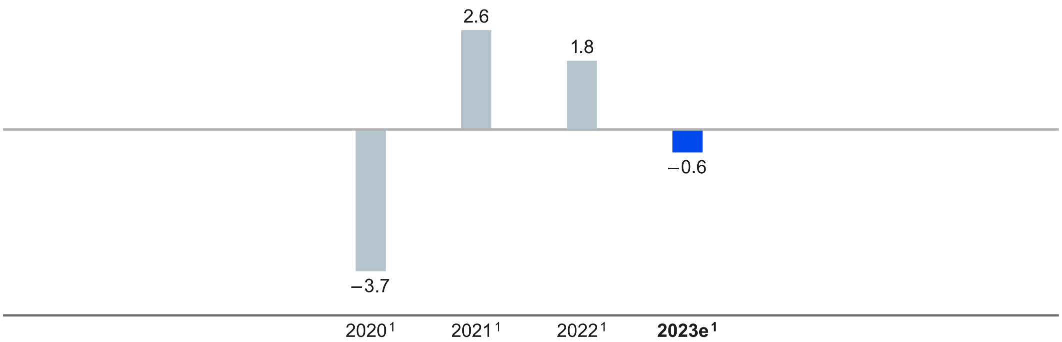
Market climate and competition

German economy in reverse gear

In their Joint Economic Forecast dated autumn 2023, Germany’s leading economic research institutes reduced their growth expectations for the country’s economy in the 2023 calendar year. Having forecast growth of 0.3 % in the spring, the experts now expect gross domestic product to fall by 0.6 %. This contraction is substantiated by reference to the sharp rise in energy prices in 2022, inflation, which has eroded household purchasing power, and the latest rises in interest rates, which have adversely affected the construction industry. For 2024, the economic researchers have scaled back their economic growth forecast by 0.2 percentage points to 1.3 %.

GDP development in Germany

(%)



1 Calendar year

Source: Joint Economic Forecast Autumn 2023 by Germany’s leading economic research institutes (September 2023)

Decrease in electricity generation in Germany

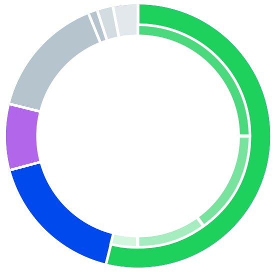
Based on current calculations compiled by the Association of the German Energy and Water Industries (BDEW), gross electricity generation volumes totalled 374 billion kWh in Germany in the first nine months of 2023 and were around 13 % lower than in the previous year (429 billion kWh).

Renewables share of German electricity generation rises to 54 %

According to BDEW estimates, the renewable share of gross electricity generation in Germany totalled 54 % in the first nine months of the 2023 calendar year, up from 45 % in the previous year’s period. Part of this relative increase is also due to lower electricity consumption in Germany, which fell by around 6 % compared with 2022 to 367 billion kWh in the first three quarters of 2023. Wind-based generation played a key role in the increase in the renewables share, although onshore and offshore electricity production showed disparate developments. Electricity generation volumes from onshore wind turbines were 8 % higher than in the previous year, while offshore wind turbines showed a 7 % reduction. Overall, the volume of electricity generated from wind rose by around 5 %. Photovoltaics systems also produced around 6 % more electricity. By contrast, biomass and biogenic municipal waste generated around 1 % less electricity than one year earlier. Overall, around 200 billion kWh of electricity was generated from renewable energies.

Gross electricity generation in Germany

Shares %	2023[1]
Electricity from renewable energies	54
Wind power	25
Photovoltaics	15
Biomass, including biogenic municipal waste	10
Water	4
Lignite	17
Hard coal	8
Natural gas	15
Petroleum products	1
Nuclear energy	2
Other	3



1 January to September 2023

Source: BDEW Monthly Statistics, Destatis, EEX, VGB, ZSW (October 2023)

Wind power expansion accelerating once again

In January 2023, the German Wind Energy Association (BWE) published its “Wind Energy Fact Sheet Germany” for the 2022 calendar year. Overall, gross onshore wind power capacity totalling 2,302 MW was newly installed in Germany. With growth of 25 % compared with the previous year’s figure, the upward trend seen in the capacity newly added each year since 2019 has continued. However, the volume of new capacities still remains well short of the record years from 2014 to 2017. Total installed onshore and offshore wind power capacity stood at 66,242 MW and was thus around 4 % higher than the previous year’s figure.

According to the BWE Fact Sheet published in July 2023 on the expansion status for onshore and offshore wind power, gross onshore wind power capacity totalling 1,565 MW was added in Germany in the first half of the 2023 calendar year. That corresponds to around 60 % more than in the first six months of the previous year. Cumulative installed onshore and offshore wind power capacity amounted to 67,728 MW.

Wholesale prices for fuels and electricity remain high

Wholesale prices (average) from 1 October to 30 September

	FY 2023	FY 2022	+/– change	% change
Crude oil[1] (US$/barrel)	83.61	96.63	– 13.02	– 13
Natural gas[2] (Euro/MWh)	68.25	93.58	– 25.33	– 27
Coal[3] (US$/tonne)	150.29	189.44	– 39.15	– 21
CO_2 rights[4] (Euro/tonne)	90.48	80.80	+ 9.68	+ 12
Electricity[5] (Euro/MWh)	172.13	234.72	– 62.59	– 27

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

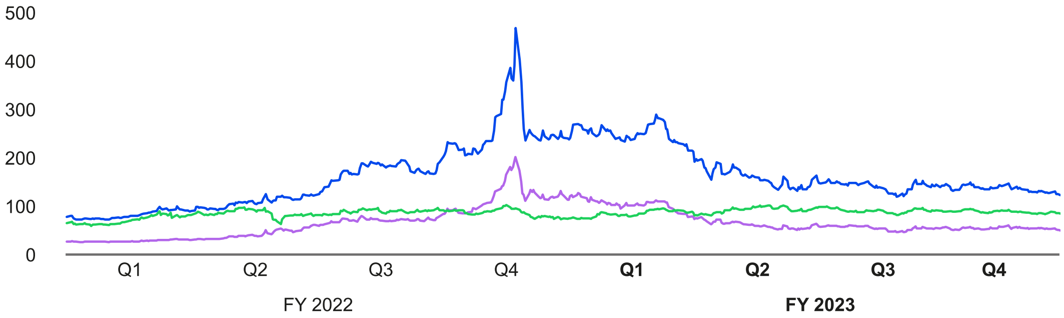
After the extreme price movements seen on energy markets in the 2022 financial year, in the year under report wholesale prices for fuels and electricity showed a year-on-year reduction. Average prices nevertheless remain elevated compared with previous years. The fall in prices mostly occurred in the first half of the 2023 financial year. Alongside a lower level of structural energy demand, the easing in prices was driven above all by a mild winter and the rise in LNG imports in Europe. In summer 2023, numerous wholesale energy prices showed volatile developments around overall levels that moved sideways.

The average price of Brent crude oil fell year-on-year by around 13 %. Barrel price highs of around US$ 125 per barrel in summer 2022 were followed by a volatile downward movement to a minimum of around US$ 70 in spring 2023. In the coal market, the downward trend started slightly later in the wake of an all-time high at the beginning of September 2022. Having bottomed out at the end of spring 2023, the coal price began to rise again in the fourth quarter of the 2023 financial year. On average for the year under report, however, the coal price nevertheless fell by around 21 %, while the gas price in the Trading Hub Europe (THE) market region decreased by around 27 % compared with the previous year.

Wholesale electricity prices fell on average by around 27 %, or Euro 63/MWh, in the 2023 financial year compared with the previous year. In absolute terms, they therefore showed the sharpest reduction. However, this depreciation was significantly smaller in scale than the price rises seen in the 2022 financial year. Prices showed highly volatile developments in the year under report, during which the electricity price for base load deliveries in the 2024 calendar year plummeted at times to lows around 60 % below its previous high.

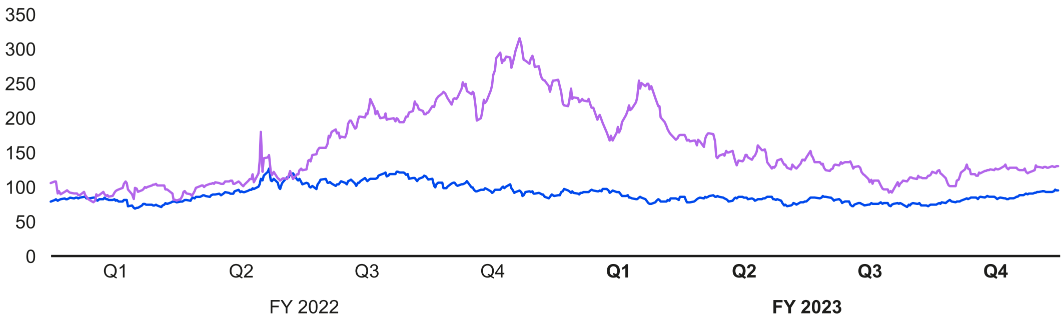
The margins achieved from generating electricity from hard coal and gas – clean dark spread (CDS) and clean spark spread (CSS) – showed disparate developments during the year under report. The CDS fell significantly in the first half of the year. By contrast, the CSS initially recovered before settling at a lower, negative level. In the year under report as a whole, average generation margins were lower than in the previous year.

Development in wholesale market prices for electricity, gas and CO_2 rights



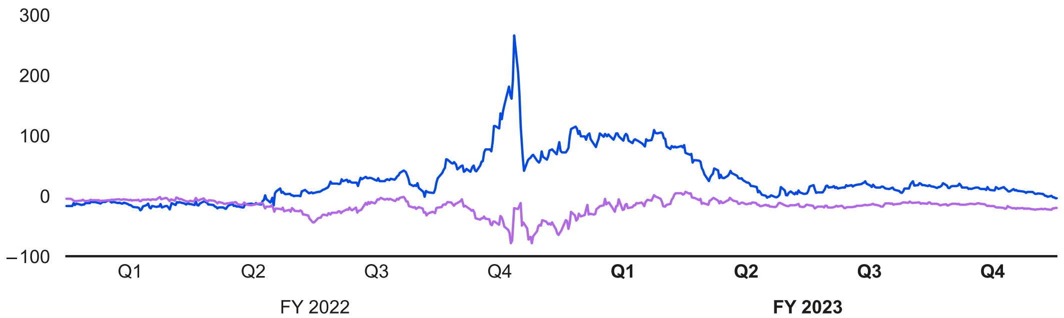
- EEX electricity base calendar year 2024 (Euro/MWh)
- EEX natural gas Trading Hub Germany calendar year 2024 (Euro/MWh)
- EUA December 2024 (Euro/tonne CO_2)

Development in wholesale prices for oil and coal



- Brent crude oil front-month (US$/barrel)
- API2 coal calendar year 2024 (US$/metric tonne)

Development in clean dark spread and clean spark spread 2024



- Clean dark spread 2024 (Euro/MWh)
- Clean spark spread 2024 (Euro/MWh)

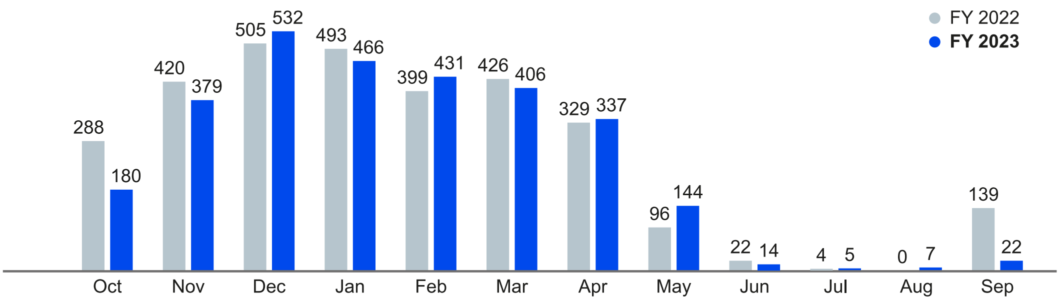
Impact of weather conditions

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 on average in the year under report than in the previous year. Degree day figures were not only around 6 % lower than the figures for the previous year; they were also the lowest seen in the past ten years. Over a ten-year period, the 2023 financial year therefore had the highest average temperature. Based on our assessment, this factor was supplemented by the savings achieved by our customers, irrespective of temperatures, due to the exceptional supply situation arising as a result of the war in Ukraine.

Wind volumes above previous year's level
By analogy with our customers' heating 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 in the 2023 financial year was around 4 % higher overall than the long-term average. Wind volumes were thus higher than the previous year's figure, which itself fell around 4 % short of the long-term average at our wind power locations. For this comparison, we draw on the "EMD-ERA" wind index with a reference period (historical average).

Degree day figures



Earnings, Asset and Financial Position

The period under report is the 2023 financial year, which started on 1 October 2022 and ended on 30 September 2023. 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. The sale of our MVV Energie CZ Group subsidiary was completed in December 2022. In June 2023, our shares in Stadtwerke Ingolstadt were transferred to the City of Ingolstadt. Both companies are no longer included in the consolidated financial statements at the balance sheet date. Figures have been rounded up or down to the nearest million-euro amounts. Discrepancies may arise between the aggregate sums of individual items and the totals stated.

Presentation of earnings performance

MVV from 1 October to 30 September

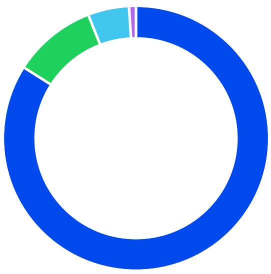
Euro million	**FY 2023**	FY 2022	+/– change	% change
Sales and earnings				
Adjusted sales excluding energy taxes	7,531	4,199	+ 3,332	+ 79
Adjusted EBIT	880	353	+ 527	>+ 100
Adjusted EBIT excluding disposal gains	747	298	+ 449	>+ 100
Turnover				
Electricity (kWh million)	18,941	27,115	– 8,174	– 30
Heat (kWh million)	5,489	6,708	– 1,219	– 18
Gas (kWh million)	16,840	19,259	– 2,419	– 13
Water (m^3 million)	38.4	40.2	– 1.8	– 4
Usable residual waste delivered (tonnes 000s)	2,371	2,448	– 77	– 3

In sales, we eliminate the difference between the hedge and reporting date prices as of the respective realisation date pursuant to IFRS 9. In the realisation period from 1 October to 30 September, the net total amounted to Euro – 911 million (previous year: Euro 1,724 million). Overall, adjusted sales rose by Euro 3.3 billion to Euro 7.5 billion, a development chiefly driven by the year-on-year increase in wholesale electricity and gas prices. MVV generated 95 % of its consolidated sales in Germany in the 2023 financial year (previous year: 93 %), while 5 % of sales were generated abroad (previous year: 7 %).

Adjusted sales excluding energy taxes by reporting segment

Shares (%)

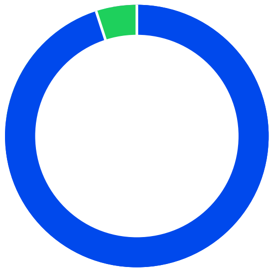
	FY 2023
Customer Solutions	84
New Energies	10
Supply Reliability	5
Strategic Investments	1



Adjusted sales excluding energy taxes by region

Shares (%)

	FY 2023
Germany	95
International	5



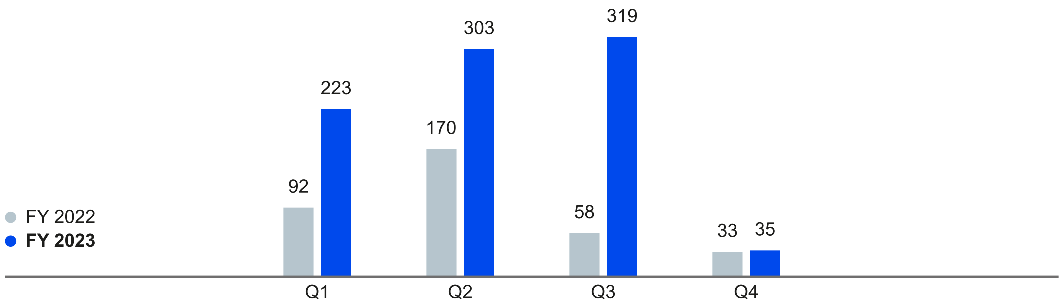
On an operating level, i.e. excluding disposal gains of Euro 133 million (previous year: Euro 55 million), adjusted EBIT came to Euro 747 million in the year under report (previous year: Euro 298 million) and thus exceeded the range of between Euro 650 million and Euro 720 million which we had forecast at the end of the first half of the year. In our 9-month reporting, we referred to this possibility should energy markets stabilise and no setbacks arise due to macroeconomic factors.

The key driver of the growth in adjusted EBIT was the exceptional performance of the Commodities business field. Here, our energy trading systematically expanded the marketing and management of renewable energies while maintaining a conservative approach to risk management. Moreover, we generated significant additional revenues by exploiting price volatilities in our trading activities with renewable energies. At the same time, we also achieved earnings growth in our portfolio management activities for conventional energy trading.

The other operating reporting segments each also contributed to a lesser extent to the growth in adjusted EBIT. Our environmental energy business in particular generated higher earnings contributions, benefiting here from the development in electricity and steam revenues, higher wind volumes and the addition of new wind turbines in the previous year already. Furthermore, earnings in the Supply Reliability segment rose compared with the previous year.

Adjusted EBIT by quarter

Euro million



Customer Solutions reporting segment

Customer Solutions from 1 October to 30 September

Euro million	FY 2023	FY 2022	+/– change	% change
Sales and earnings				
Adjusted sales excluding energy taxes	6,313	3,106	+ 3,207	>+ 100
Adjusted EBIT	497	136	+ 361	>+ 100
Turnover				
Electricity (kWh million)	18,681	26,546	– 7,865	– 30
Heat (kWh million)	4,150	4,664	– 514	– 11
Gas (kWh million)	16,449	18,841	– 2,392	– 13
Water (m³ million)	38.4	39.3	–0.9	– 2
Usable residual waste delivered (tonnes 000s)	150	145	+ 5	+ 3

Adjusted sales increased compared with the previous year. This was particularly the case in the electricity business as, due to developments in market prices, the underlying trading transactions were in some cases concluded at a higher price levels in previous years.

In the year under report, our energy trading business systematically expanded the marketing and managing of renewable energies while maintaining a conservative approach to risk management. Moreover, by exploiting exceptional price volatilities we were able to generate substantial additional revenues from trading with renewable energies. At the same time, we also generated earnings growth in our portfolio management activities for conventional energy trading. Overall, these factors led to a significant increase in adjusted EBIT.

The reduction in electricity and gas volumes is chiefly due to lower trading volumes resulting on the one hand from fewer opportunities to optimise the portfolio given the changed market climate and on the other from netting effects between sales procurement and increased marketing volumes. The year-on-year reduction in heat turnover was due above all to mild weather conditions. We also assume that the development in gas and heat turnover reflects energy-saving measures taken by our customers during the 2022/23 heating period.

New Energies reporting segment

New Energies from 1 October to 30 September

Euro million	FY 2023	FY 2022	+/– change	% change
Sales and earnings				
Adjusted sales excluding energy taxes	750	579	+ 171	+ 30
Adjusted EBIT	176	150	+ 26	+ 17
Turnover				
Electricity (kWh million)	230	238	– 8	– 3
Heat (kWh million)	1.316	1.369	– 53	– 4
Gas (kWh million)	246	273	– 27	– 10
Usable residual waste delivered (tonnes 000s)	2.221	2.186	+ 35	+ 2

The increase in adjusted sales was driven above all by our international project development business.

Adjusted EBIT rose compared with the previous year. On the one hand, we benefited in the year under report from high volumes of electricity and steam revenues, thus offsetting negative price effects for waste, waste timber and operating resources. On the other hand, the earnings contributions from our wind turbines, our biomethane plants and our international project development business were higher than in the previous year.

The reduction in gas turnover was primarily attributable to a lower level of plant availability.

Supply Reliability reporting segment

Supply Reliability from 1 October to 30 September

Euro million	FY 2023	FY 2022	+/– change	% change
Sales and earnings				
Adjusted sales excluding energy taxes	405	387	+ 18	+ 5
Adjusted EBIT	58	37	+ 21	+ 57

Adjusted sales were at the same level as in the previous year.

The year-on-year development in adjusted EBIT was mainly influenced by two factors. Firstly, one generation plant was only available to a limited extent both in the year under report and in the previous year. However, the negative impact on earnings due to the lower level of plant availability was significantly reduced compared with the previous year. Secondly, the year under report was characterised by a lower volume of electricity production due to price factors, a development which led to higher volumes of electricity being procured from the upstream grid. Overall, earnings in this reporting segment improved compared with the previous year.

Strategic Investments reporting segment

Strategic Investments from 1 October to 30 September

Euro million	FY 2023	FY 2022	+/– change	% change
Sales and earnings				
Adjusted sales excluding energy taxes	62	126	– 64	– 51
Adjusted EBIT	154	18	+ 136	>+ 100
Turnover				
Electricity (kWh million)	30	331	– 301	– 91
Heat (kWh million)	23	675	– 652	– 97
Gas (kWh million)	145	145	0	0
Water (m^3 million)	0,0	0.9	– 0.9	– 100
Usable residual waste delivered (tonnes 000s)	0	117	– 117	– 100

Adjusted EBIT grew significantly compared with the previous year due to the disposal gains generated from the sale of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt. Turnover and sales both decreased on account of the sale of the MVV Energie CZ Group. The shareholding held in Stadtwerke Ingolstadt was consolidated at equity.

Other Activities reporting segment

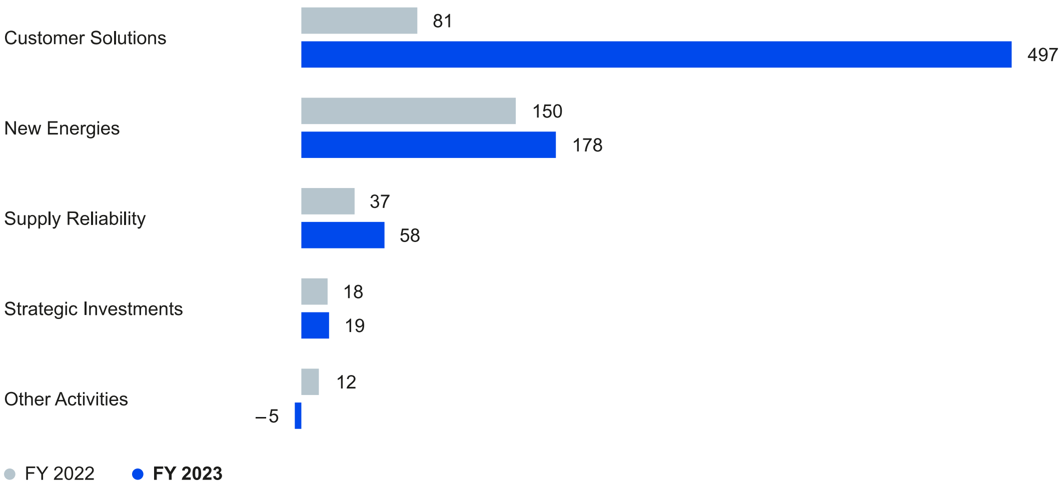
Other Activities from 1 October to 30 September

Euro million	FY 2023	FY 2022	+/– change	% change
Sales and earnings				
Adjusted sales excluding energy taxes	1	1	0	0
Adjusted EBIT	– 5	12	– 17	–

The reduction in adjusted EBIT is principally due to expenses incurred to establish a charitable foundation to mark the 150th anniversary of MVV and its predecessor companies.

Adjusted EBIT excluding disposal gains by reporting segment

Euro million



Reconciliation of adjusted EBIT and operative adjusted EBIT

In the following table, we show how we reconcile the EBIT reported in the income statement for the 2023 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 2023	FY 2022	+/– change
EBIT as reported in income statement	1,063	35	+ 1,028
Financial derivative measurement items	– 186	315	– 501
Interest income from finance leases	3	3	0
Adjusted EBIT	**880**	**353**	**+ 527**

For our value-based management, we refer to adjusted EBIT and calculate this key figure chiefly by adjusting our earnings before interest and taxes to eliminate positive and negative items resulting from fair value measurement as of the reporting date of those financial derivatives recognised under IFRS 9. 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.

Our adjusted EBIT for the year under report and the 2022 financial year was significantly affected by disposal gains generated from the sale of shareholdings. These gains amounted to Euro 133 million in the year under report and to Euro 55 million in the previous year. As these involve non-recurring items, we have additionally reported our operative adjusted EBIT. In the 2023 financial year, this amounted to Euro 747 million (previous year: Euro 298 million).

Development in other 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** rose by Euro 2,788 million to Euro 5,919 million. This increase largely reflects the higher wholesale prices realised for gas and electricity compared with the previous year, as well as the development in our project development business.

Driven above all by workforce growth at several domestic group companies and by collectively agreed pay rises, **employee benefit expenses** increased by Euro 30 million to Euro 541 million.

Adjusted income from derivative financial instruments (chapter Notes to Income Statement, Note 4) rose by Euro 6 million to Euro 198 million, while **adjusted expenses for derivative financial instruments** (chapter Notes to Income Statement, Note 8) grew by Euro 12 million to Euro 189 million.

The development in **other operating income** (chapter Notes to Income Statement, Note 5) was chiefly shaped by income from the sale of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt. Overall, adjusted other operating income rose year-on-year by Euro 131 million to Euro 258 million. The increase in **other operating expenses** by Euro 100 million to Euro 307 million was driven in particular by expenses for public relations, business agency agreements, IT operations and the windfall tax (chapter Notes to Income Statement, Note 9).

At Euro 22 million, **income from companies recognised at equity** was at the same level as in the previous year.

The reduction in **depreciation and amortisation** (chapter Notes to Income Statement, Note 11) by Euro 4 million to Euro 207 million largely resulted from the sale of the MVV Energie CZ Group.

The **adjusted financial result** (expense) rose by Euro 19 million to Euro – 51 million. This was principally due to foreign currency translation items, which were offset only in part by higher interest income.

Net of the adjusted financial result, **adjusted EBT** amounted to Euro 829 million in the 2023 financial year, Euro 507 million higher than in the previous year (Euro 322 million). Adjusted taxes on income stood at Euro 237 million (previous year: Euro 73 million).

Adjusted annual net income rose by Euro 343 million and amounted to Euro 592 million for the year under report.

At Euro 79 million, **adjusted non-controlling interests** were Euro 7 million higher than in the previous year, a development chiefly due to improved earnings at Stadtwerke Kiel. **Adjusted annual net income after minority interests** rose by Euro 337 million to Euro 513 million (previous year: Euro 176 million). On this basis, **adjusted earnings per share** amounted to Euro 7.78 (previous year: Euro 2.67). The number of shares was unchanged at 65.9 million.

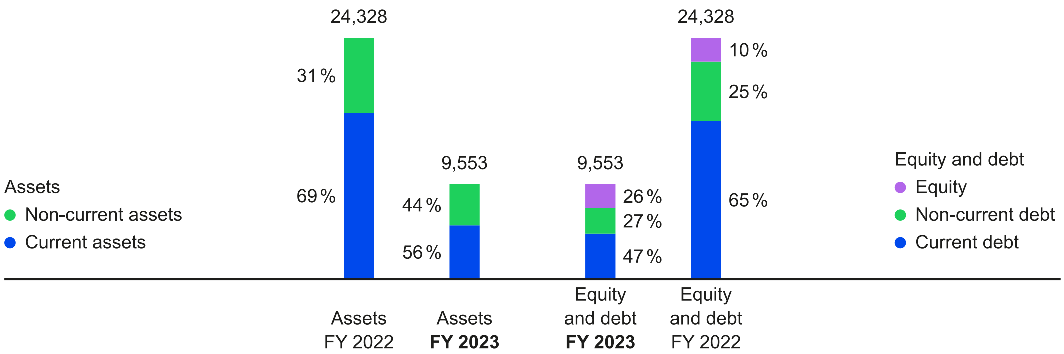
Presentation of asset position

Balance sheet structure

Euro 000s	**30 Sep 2023**	30 Sep 2022	% change
Assets			
Non-current assets	4,202,038	7,569,386	– 44
Current assets	5,351,443	16,758,893	– 68
Total assets	**9,553,481**	**24,328,279**	**– 61**
Equity and debt			
Equity	2,456,005	2,446,071	0
Non-current debt	2,557,105	5,998,445	– 57
Current debt	4,540,371	15,883,763	– 71
Total equity and debt	**9,553,481**	**24,328,279**	**– 61**

Balance sheet structure

Euro million



Balance sheet development

Total assets fell to Euro 9,553 million, down Euro 14,775 million compared with 30 September 2022, with this reduction chiefly being due to the lower fair values of energy trading transactions recognised under IFRS 9. These changes are reflected in the development in asset-side and liability-side derivative financial instruments (chapter Notes to Balance Sheet, Notes 24 and 36) and in the change in deferred tax assets and liabilities (chapter Notes to Balance Sheet, Note 39). Asset-side derivative financial instruments fell year-on-year by Euro 13,891 million to Euro 3,536 million, while liability-side derivative financial instruments decreased by Euro 13,168 million to Euro 3,438 million.

Non-current assets decreased by Euro 3,367 million to Euro 4,202 million. As outlined above, this reduction mainly results from the lower fair values of energy trading transactions recognised under IFRS 9. Due above all to the sale of the MVV Energie CZ Group, property, plant and equipment fell by Euro 31 million to Euro 2,924 million. The development in shareholdings recognised at equity on the one hand reflects the sale of the shares held in Stadtwerke Ingolstadt. This was opposed by the increase in actuarial gains and losses at a company recognised at equity. Overall, shareholdings in companies recognised at equity declined by Euro 40 million to Euro 154 million.

Current assets fell by Euro 11,407 million to Euro 5,351 million. Here too, the reduction was essentially due to lower fair values of energy trading transactions recognised under IFRS 9. Inventories (chapter Notes to Balance Sheet, Note 27) decreased by Euro 30 million to Euro 322 million, with this resulting in particular from our project development business and the removal of gas from a storage cavern. The reduction in trade receivables (chapter Notes to Balance Sheet, Note 28) by Euro 39 million to Euro 515 million results above all from declining purchase volumes and energy market prices. The increase in current other financial receivables and assets by Euro 258 million to Euro 321 million is primarily attributable to cash investments with terms longer than three months, as well as to the rise in receivables from security deposits for counterparty default risk. Due above all to tax refunds, income tax receivables (chapter Notes to Balance Sheet, Note 29) decreased by a total of Euro 32 million to Euro 26 million. Cash and cash equivalents (chapter Notes to Balance Sheet, Note 30) fell by Euro 910 million to Euro 975 million. This reduction was chiefly due to high outflows of funds amounting to Euro 1,400 million for security deposits for counterparty default risk (margins) (previous year: inflow of Euro 595 million). Furthermore, investments, cash investments and dividend payments also led to an outflow of liquidity. These items were opposed by the significant increase in operating earnings and the disposals of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt.

Our equity including non-controlling interests amounted to Euro 2,456 million at the balance sheet date and was thus Euro 10 million higher than in the previous year (chapter Notes to Balance Sheet, Note 31).

Non-current debt decreased by Euro 3,441 million to Euro 2,557 million, with this change principally due to the lower fair values of energy trading transactions recognised under IFRS 9 compared with the previous year's balance sheet date. The rise in other non-financial liabilities (chapter Notes to Balance Sheet, Note 37) by Euro 35 million to Euro 179 million chiefly results from an increase in prepayments received, as well as from higher contract liabilities for construction cost grants. These factors were opposed by a lower volume of VAT liabilities.

Current debt fell by Euro 11,343 million to Euro 4,540 million. This development also mainly reflects the changed level of market prices and resultant change in fair values of energy trading transactions recognised under IFRS 9. The reduction in trade payables (chapter Notes to Balance Sheet, Note 38) by Euro 35 million to Euro 472 million also chiefly results from the lower level of wholesale prices on the energy markets. The decrease in current other financial liabilities by Euro 1,286 million to Euro 255 million is primarily attributable to a lower volume of liabilities for security deposits for counterparty risk (margins). Due above all to higher earnings in the year under report and the resultant higher tax charge, income tax liabilities (chapter Notes to Balance Sheet, Note 39) rose by Euro 88 million to Euro 127 million.

For Group management purposes, we adjust our consolidated balance sheet at 30 September 2023 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 3,525 million (30 September 2022: Euro 17,441 million). On the equity and debt side, we eliminate negative fair values and allocable deferred taxes, which stood at Euro 3,460 million (30 September 2022: Euro 16,858 million). Within equity, we then eliminate the net balance of Euro 65 million (30 September 2022: Euro 583 million). This results in adjusted equity of Euro 2,391 million at 30 September 2023 (30 September 2022: Euro 1,863 million). As a percentage of adjusted total assets of Euro 6,028 million (30 September 2022: Euro 6,888 million), the adjusted equity ratio came to 39.7 % at 30 September 2023, as against 27.1 % at 30 September 2022. This increase is attributable above all to the substantial reduction in total assets due to high outflows of security deposits (margins). Excluding these margins, the adjusted equity ratio amounted to 40.7 % at 30 September 2023 (30 September 2022: 34.3 %).

From our perspective, the reduction in the fair values of energy trading transactions recognised under IFRS 9 and in security deposits for counterparty default risk (margins) indicate that markets have become slightly calmer once again since the beginning of the war in Ukraine and that energy industry fundamentals are now returning to the foreground.

Investments

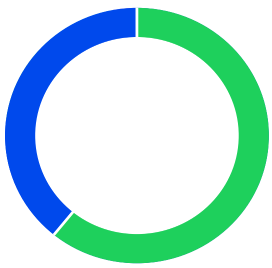
We invested a total of Euro 344 million in the 2023 financial year (previous year: Euro 335 million).

Investments from 1 October to 30 September

Euro million	FY 2023	FY 2022	+/– change	% change
Customer Solutions	29	58	– 29	– 50
New Energies	133	109	+ 24	+ 22
Supply Reliability	160	135	+ 25	+ 19
Strategic Investments	4	11	– 7	– 64
Other Activities	18	22	– 4	– 18
Total	**344**	**335**	**+ 9**	**+ 3**

Investments
Shares (%)

	FY 2023
Growth investments	61
Investments in existing business	39



Our largest investment projects involved:

- Investing in green heat generation plants, including building plants to provide backup and cover peak load in our district heat supply, building our first river heat pump and the grid connections required for this
- Taking over a 70 % stake in an Italian company specialising in the development of PV projects
- Building windfarms and solar parks and taking over PV parks into our proprietary portfolio
- Installing a new plant technology to produce phosphorous from sewage sludge in Mannheim
- Maintaining and renewing our distribution grids to safeguard supply reliability
- Building charging infrastructure in Mannheim and the region.

Presentation of financial position

Current and non-current financial debt (chapter Notes to Balance Sheet, Note 34) decreased by Euro 119 million to Euro 1,798 million. The taking up of new loans was countered by higher repayments of existing loans. At the same time, **cash and cash equivalents** (chapter Notes to Balance Sheet, Note 30) fell by Euro 910 million to Euro 975 million. This was chiefly due to high outflows of security margins for counterparty default risk (margins), which amounted to Euro 1,400 million (previous year: inflow of Euro 595 million). Moreover, investments, cash investments and the dividend payment also led to outflows of liquidity. These factors were opposed by the significant rise in operating earnings and the disposals of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt. Overall, **net financial debt** (current and non-current financial debt less cash and cash equivalents) rose by Euro 791 million to Euro 823 million. Excluding margins, net financial debt showed a significant reduction to Euro 840 million (previous year: Euro 1,449 million).

The **cash flow before working capital and taxes** increased year-on-year by Euro 422 million. This development was chiefly due to the fact that, also after elimination of non-cash-effective and non-operating income and expenses, the significant year-on-year growth in earnings before taxes (EBT) led to a higher volume of cash-effective operating earnings. The largest item in this elimination related to the non-cash-effective measurement of derivatives pursuant to IFRS 9. The reclassification of non-operating income generated from the sales of the MVV Energie CZ Group and the shares in Stadtwerke Ingolstadt to the cash flow from investing activities also impacted negatively on the cash flow before working capital.

The **cash flow from operating activities** fell year-on-year by Euro 1,566 million. This resulted above all from higher repayments of security deposits for counterparty default risk (margins). Largely on account of lower wholesale prices for electricity and gas, the period under report saw a significant reduction in the volume of margins received. This more than offset the significant improvement in the operating cash flow. Adjusted to exclude the change in margins deposited, the cash flow from operating activities increased by Euro 430 million to Euro 786 million and was thus consistent with the strong operating earnings performance. Alongside higher earnings, the main factor influencing the year-on-year development in the cash flow from an operating perspective was the reduction in the volume of receivables and inventories.

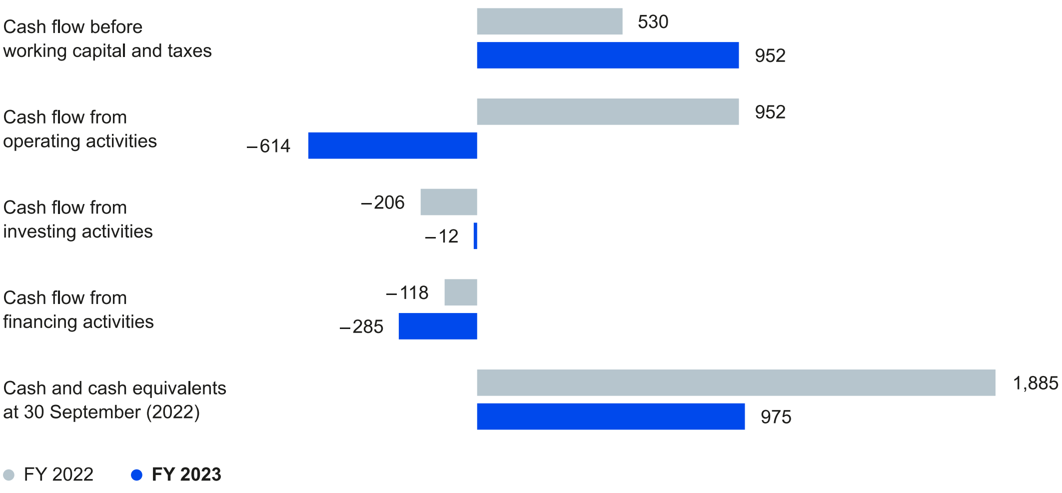
The development in the **cash flow from investing activities** was chiefly shaped by proceeds from the sales of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt in the period under report. Moreover, the volume of outgoing payments to acquire companies was lower in the current period. These factors were countered by higher payments for investments in non-current assets. Overall, the cash flow from investing activities rose year-on-year by Euro 195 million.

The **cash flow from financing activities** fell by Euro 167 million to Euro – 285 million, a development mainly resulting from a lower volume of net new borrowing.

MVV reported **cash and cash equivalents** of Euro 975 million at 30 September 2023 (30 September 2022: Euro 1,885 million). Excluding margins, cash and cash equivalents stood at Euro 958 million (previous year: Euro 468 million).

Cash flow statement

Euro million



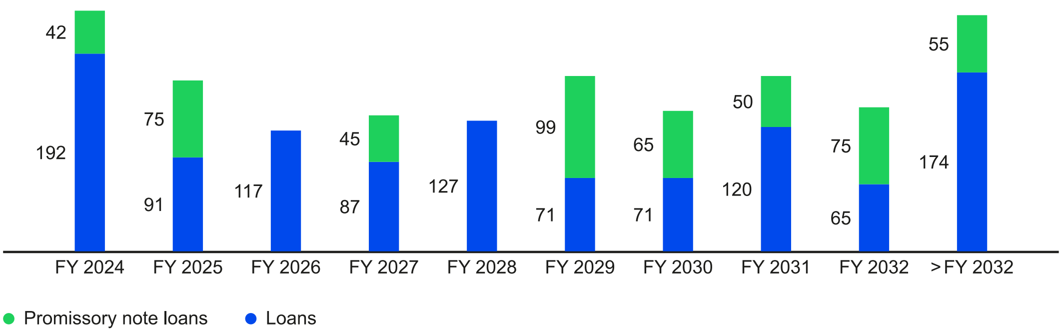
Financial management

Our access to the capital markets is as good 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 is well balanced for the years ahead.

Repayment profile

Euro million



At the balance sheet date, MVV Energie managed a cash pool for itself and 35 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 does not have an external credit rating. 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: there are no non-financial targets which would 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, in the chapter EU Taxonomy, which forms a constituent part of this NFD, we publish the corresponding disclosures required by Article 8 of the EU Taxonomy and the associated Delegated Regulations and Acts.

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) 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.

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. As in previous years, moreover, we will publish our Sustainability Report for the 2023 financial year on our website in February 2024. We prepare this in accordance with the GRI Standards of the Global Reporting Initiative and thus go beyond our statutory reporting obligations to satisfy the transparency requirements of our stakeholders.

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 research and internal analysis
- Surveys of those specialist departments which have interfaces with our external stakeholder groups
- Workshops and interviews with select stakeholders and internal experts
- Use of external AI-based data providers

We review all aspects of the materiality process every three to four years and did so 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 shareholders. 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 2023 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 impact of our business activities on these aspects. The Table of Contents provides an overview of these aspects. We base our description of concepts and our non-financial key figures for this NFD on GRI Standards (2021).

Business model and risk analysis

We are pursuing a long-term strategy focused on climate protection. 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 solutions 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 2023 financial year concluded that there were no risks which satisfied the materiality criteria set out in § 289c (3) Nos. 3 and 4 HGB.

The war in Ukraine and its associated impact on energy markets influenced MVV's performance once again in the year under report. Our risk management continually evaluates the resultant financial and non-financial risks. In this context, one knock-on effect involves climate protection: Germany changed its generation structure in order to consume less natural gas. Although less coal was consumed in the year under report than in the previous year, the volume of coal use was nevertheless higher than envisaged in the original coal exit trajectory. The reactivated coal-fired power plants are still in operation and there is still the risk of gas shortages arising in the winter of 2023/24. We explain how we are reacting to these developments in the environmental concerns aspect in the section Climate Neutrality.

The political implementation of the energy transition and decarbonisation continues to impact on our operating business, 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 climate protection strategy and our strategic sustainability and decarbonisation 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 internal management and sustainability bodies on a regular basis and whenever required by specific events 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. To promote sustainable investments even more effectively, in the year under report we included a sustainability-related component in the economic viability requirements for investments. The business fields act under their own responsibility to implement the measures and management systems on an operative level.

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 Resource efficiency and local environmental protection
	Environment and resources	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

Containing human-induced climate change is one of the greatest challenges of our time. In the EU, climate neutrality is to be achieved by 2050 at the latest. In 2021, the German Climate Protection Act (KSG) stipulated that Germany should become climate neutral by 2045 already. This course will also require unavoidable emissions to be offset. It will therefore be necessary to achieve negative emissions from the 2040s at the latest, for example by capturing CO_2. We describe the relevant developments in energy policy in the chapter Business Framework. MVV has attached great importance to climate protection, decarbonisation and renewable energies for many years already. We comment on our direct and indirect CO_2 emissions in Scopes 1, 2 and 3 in the section MVV's Climate Balance Sheet.

Energy industry has a key role to play

As one of the main emitters of CO_2, the energy industry has a key role to play in achieving climate neutrality. It must quickly reduce both its direct and its indirect emissions to zero and do entirely without fossil fuels. This affects not only the core business of energy companies, but also their upstream and downstream value chains and their shareholdings. The great challenges for this decade involve rapidly exiting from coal-based generation and reducing energy consumption in absolute terms. At the same time, it is necessary to build or modernise the infrastructures needed to facilitate a fully climate-neutral energy supply. This involves accelerating the expansion in renewable energies (electricity and heat) 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. Liquified natural gas (LNG) can only provide temporary assistance in this respect.

Climate neutrality is only an interim stage

The term climate neutrality is often used, particularly by companies, to designate strategies in which CO_2 emissions are arithmetically neutralised by working with offsetting measures rather than reducing the use of fossil-based energy to virtually zero ("net zero"). Here, it is often notable that the climate protection measures implemented are predominantly those which offer economic benefits for the respective company, rather than all those that would be technically possible to reduce CO_2 emissions. The 2023 IPCC Synthesis Report makes clear not only that the use of fossil-based energies will have to be phased out completely worldwide, but that the net balance sheet will have to be negative by the middle of the century. This means that CO_2 will have to be permanently captured by being removed from the atmosphere in order to offset unavoidable emissions, such as those arising from agriculture.

Our climate protection strategy

MVV uses the generic term #climatepositive to designate the measures required for greater climate protection. By 2035, we will be one of the first energy companies to achieve negative overall emissions, and that without deploying offsetting certificates. Our climate protection strategy and the associated sustainability and decarbonisation targets, including the measures planned, form the centrepiece of our Mannheim Model. Further information about this can be found in the chapter Corporate Strategy.

Our climate protection strategy is based on the following key principles:

- It forms an integral component of our corporate strategy and determines the allocation of our investments and service focuses, and thus our further development.

- Together with the associated measures, our sustainability and decarbonisation targets have been certified by the Science Based Target Initiative (SBTi).

- We consistently include all sources of greenhouse gas emissions, including those at our at-equity shareholdings, in MVV's climate balance sheet.

- Our CO_2 reduction strategy is intended to reduce Scope 1, 2 and 3 emissions in absolute terms; offsetting and compensation measures do not form part of the strategy.

The Executive Board bears overall responsibility for our climate protection strategy. Climate protection management is performed by our sustainability management department.

Our strategic sustainability and decarbonisation targets
To account for changes in the political and competitive climate, in the year under report we further raised the long-term sustainability and decarbonisation targets we had already set ourselves in the 2016 and 2020 financial years.

We are reducing our total CO_2 footprint to net zero and will be #climatepositive by 2035.

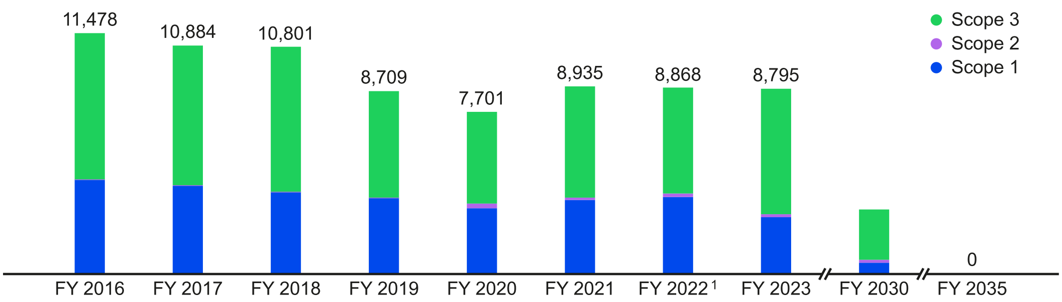
To achieve our Scope 1 target, we will decommission our remaining fossil-based energy generation and fully convert our energy generation to renewable energies. Until then, we will if necessary reduce condensation-based electricity generation at our coal power plants and take additional energy efficiency measures. The steps required to discontinue fossil-based generation by 2030 on the one hand include decommissioning the CHP plant in Offenbach. On the other hand, we assume that the nationwide exit from coal-based electricity generation envisaged by lawmakers will be completed by 2030 and that the remaining blocks at the Grosskraftwerk Mannheim power plant will no longer be operated in the market. The precise dates will largely be determined by federal policy. To achieve our net zero target for indirect emissions in Scopes 2 and 3 as well, by 2035 at the latest we will supply our customers exclusively with green heat, green electricity and green gases and decarbonise our supply chains. For MVV, net zero is achieved when we have reduced our absolute direct and indirect emissions on portfolio level by at least 95 % and have offset any residual emissions potentially unavoidable due to technical reasons with our own permanent CO_2 sinks. Unavoidable greenhouse gas emissions arise when no technical alternatives are available for the same application. Today, that is the case for generating energy from waste, for example, or for upstream emissions due to soil movements in agriculture.

Working with BECCUS (Bioenergy Carbon Capture Usage and Storage) will enable us not only to offset our own unavoidable residual emissions but also to become #climatepositive as a company thanks to the additional volumes thereby captured. To this end, by 2035 we will upgrade our bio-waste digestion, biomethane, biomass and energy from waste plants with suitable technologies enabling them to permanently remove CO_2 from the atmosphere.

This way, our biomass and energy from waste plants will in the long term become large, industrial-scale CO_2 sinks. That is because around half of the non-recyclable waste incinerated at energy from waste plants comprises biological, i.e. climate-neutral components. The other half involves waste that leads to unavoidable residual emissions. Thanks to BECCUS, the share of biogenic emissions thereby captured is turned into “negative emissions”, while the share of non-biogenic emissions captured becomes CO_2 neutral. We report the total waste-related emissions at our waste incineration and refuse-derived fuel plants in our Climate Balance Sheet. The chart below presents the historic development in our total emissions, as well as the emissions we expect until 2035.

Development in total emissions

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



1 Previous year’s figure adjusted

If we are to meet this ambitious goal, we will have to achieve further targets and milestones as we head towards becoming #climatepositive:

We will convert our district heat generation in Mannheim and Offenbach to 100 % green energy sources by 2030.

In Germany, climate neutrality can only be achieved by way of the heat transition, which means fully converting all heat generation from fossil-based to renewable energy sources. As one of the largest district heat suppliers in Germany and a supplier of natural gas, we therefore bear a particular responsibility. In summer 2023, the Federal Government decided that, by 2030, on average half of Germany’s district heat supply should result from green fuels. We are aiming for a significantly higher pace of decarbonisation. In Mannheim and Offenbach, we will generate 100 % green district heat by 2030, while Kiel is set to follow by 2035. We are continually expanding our district heat grids and supporting our customers, for example in converting from natural-gas-based house connections.

Furthermore, we will offer climate-neutral decentralised heat solutions to all households in our supply regions that are not connected to district heat.

We will offer 100 % climate-neutral customer solutions by 2035 at the latest.

Most of our indirect CO_2 emissions result from supplying electricity and natural gas to our customers. By 2035, we will gradually convert our products and services to 100 % climate-neutral solutions and supply our customers exclusively with green energy. By discontinuing sales of fossil-based fuels by 2035, we will achieve effective reductions in greenhouse gases.

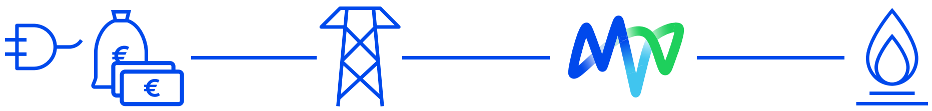
We will triple our electricity generation from renewable energies compared with 2022 to around 2,000 megawatts by 2030.

Renewable energies have been the key focus of our strategic alignment for many years already. The increased use of renewable energies is necessary to achieve the national climate protection targets. Not only that, for MVV they also offer opportunities to generate further growth. We will step up the pace of expansion for our own renewable energies generation portfolio. By 2030, we intend to increase our capacities to around 2,000 MW_e (basis 2022: 614 MW_e). Further information about our renewable energies generation portfolio can be found in the section Renewable Energies and Energy Transition.

MVV's 2023 climate balance sheet

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

Structural composition of our climate balance sheet



49 %	1 %	31 %	19 %
Scope 3 upstream	**Scope 2** [1]	**Scope 1**	**Scope 3 downstream**
» 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	» Grid losses in proprietary grids » Energy consumption at business locations	» Energy industry: energy generation (electricity, heat) » Disposal industry: EfW, RDF » Methane and sulphur hexafluoride emissions in grid and plant operations	» 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

The generation of energy at our own 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, our Scope 1 emissions are influenced by weather-based demand for heat and by developments in wholesale electricity 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 our direct emissions largely depends on the dates when our existing plants using fossil-based fuels are decommissioned and on new plants needed to secure the supply.

Our Scope 1 emissions fell year-on-year by 26 % in the 2023 financial year. This reduction was predominantly due to lower generation at our conventional CHP plants. Furthermore, this development also reflects the disposal of the MVV Energie CZ Group and the increasing volume of green heat and electricity generation. In this respect, Scope 1 CO_2 emissions fell more sharply in the year under report than would have been expected without the one-off effects. Regardless of this, we are aware that the emissions incurred have reduced the remaining budget required to comply with a 1.5-degree trajectory and have introduced operative and strategic measures to ensure budget compliance. Examples of these include accelerating the expansion of renewable energies in our own portfolio. In addition, the situation on the German gas and electricity markets may currently still be tense, but once this has eased we will align our conventional generation portfolio even more closely to avoiding CO_2 emissions and gradually decommission our remaining fossil-based generation.

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 12 % lower 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.

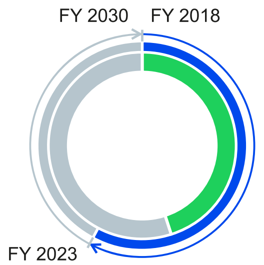
The 18 % increase in Scope 3 emissions in the 2023 financial year largely reflects two opposing effects. The sharp rise in the volume of wind and solar projects implemented led to significantly higher indirect emissions. By contrast, there was a reduction in the upstream and downstream emissions resulting from commodity sales.

We continue to assume that this trend in total direct and indirect emissions will also continue in future and that we will be able to meet our decarbonisation targets.

Reduction in energy industry CO_2 (Scope 1)

Shares (%)

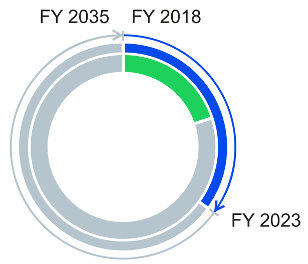
	FY 2023
Time passed	58
Target share reached	45



#climatepositive by 2035 (Scope 1, 2 and 3)

Shares (%)

	FY 2023
Time passed	35
Target share reached	20



Lower specific CO_2 emissions

Specific CO_2 emissions for our generation portfolio decreased compared with the previous year, with this being due to the lower volume of conventional electricity generation.

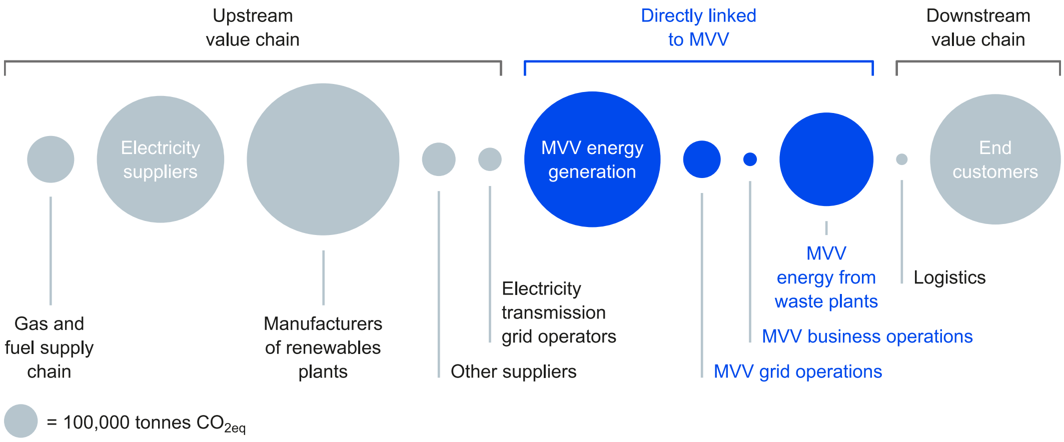
Specific CO_2 emissions in the groupwide generation portfolio

g CO_2/kWh	FY 2023	FY 2022
Electricity generation	365	460
Heat generation	115	122
Energy generation in the generation portfolio	212	249

We again operated our plants in accordance with the approvals granted and relevant legal requirements in the 2023 financial year. We continually monitored compliance with the threshold values applicable to our 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 2023**	FY 2022	+/– change	% change
Direct CO_2 emissions (Scope 1) [1, 2]	2,684	3,649	– 965	– 26
Energy industry activities [2]	1,852	2,703	– 851	– 31
of which CH_4 emissions [2, 3]	42	58	– 16	– 28
of which SF_6 emissions [4]	2	1	+ 1	+ 100
Disposal activities (EfW) [5]	832	946	– 114	– 12
Indirect CO_2 emissions (Scope 2) [2, 6]	127	147	– 20	– 14
of which energy procured for proprietary plants [2]	6	7	– 1	– 14
of which energy used for grid operations [2]	121	140	– 19	– 14
Indirect CO_2 emissions (Scope 3) [2]	5,984	5,072	+ 912	+ 18
of which purchased goods and services (GHG category 1) [7]	2,429	872	+ 1,557	>+ 100
of which fuel and energy-related activities (GHG category 3)	1,839	2,302	– 463	– 20
of which waste generated in operations (GHG category 5)	3	1	+ 2	>+ 100
of which business travel (GHG category 6)	0	1	– 1	– 100
of which employee commuting (GHG category 7)	6	6	0	0
of which use of sold products (GHG category 11) [2]	1,702	1,887	– 185	– 10
of which end-of-life treatment of sold products (GHG category 12)	3	1	+ 2	>+ 100
of which downstream leased assets (GHG category 13)	2	2	0	0
For information: indirect emissions from gas grid use by third-party sales operations [8]	545	620	– 75	– 12
For information: climate-neutral biogenic emissions	1,653	1,706	– 53	– 3
For information: biogenic emissions captured at MVV plants (BECCUS)	< 1	0	+< 1	+ 100

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

5 Including RDF plants

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

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

8 Due to the 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

By expanding renewable energies, we are also making a measurable contribution to achieving the national climate protection targets on behalf of society as a whole. We set out our climate protection strategy in the chapter Corporate Strategy.

Developments in year under report

Green generation portfolio extended

We are expanding our own portfolio, particularly by adding onshore wind turbines and photovoltaics systems. Including our shareholdings recognised at equity and despite retirements from our portfolio in connection with the disposal of shareholdings, our electricity generation capacity from renewable energies stood at 633 MW at the end of the 2023 financial year and thus 19 MW higher than one year earlier.

At the end of the 2023 financial year, electricity generation at renewable energies plants (including biomass/biogas plants and EfW/RDF) accounted for 49 % of our total electricity generation capacity (previous year: 47 %). The prorated share of installed conventional generation capacity fell by 7 % in the 2023 financial year.

Electricity generation capacity
Fully consolidated companies and companies recognised at equity

MW_e	**FY 2023**	FY 2022	+/– change	% change
Biomass and biogas plants [1]	120	121	– 1	– 1
EfW [2]	172	176	– 4	– 2
Wind power	280	290	– 10	– 3
Photovoltaics	59	25	+ 34	>+ 100
Hydroelectricity	2	2	0	0
Renewables and EfW	**633**	**614**	**+ 19**	**+ 3**
Conventional CHP and other activities	655	703	– 48	– 7
Total	**1,288**	**1,317**	**– 29**	**– 2**

1 Including biomethane plants

2 Including RDF plants and sewage sludge treatment

The generation capacity at our biomethane plants did not change compared with the previous year and stood at 41 MW at the end of the 2023 financial year. Biomethane 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 24 % share of our total heat generation capacities (previous year: 21 %).

Heat generation capacity
Fully consolidated companies and companies recognised at equity

MW_t	**FY 2023**	FY 2022	+/– change	% change
Biomass and biogas plants	88	99	– 11	– 11
EfW [1]	724	762	– 38	– 5
Green heat capacity	**812**	**861**	**– 49**	**– 6**
Conventional CHP and other activities	2,573	3,150	– 577	– 18
Total	**3,385**	**4,011**	**– 626**	**– 16**

1 Including RDF plants and sewage sludge treatment

International growth in 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.

In the 2017 financial year, we set ourselves the target of connecting around 10,000 MW of renewable energies to the grid between 2016 and 2026. In the 2023 financial year, we connected 1,436 MW. Between 2017 and the end of the year under report, we have therefore added a total of 4,665 MW. We expect to see increasingly dynamic developments in terms of the installation of renewable energies in the years ahead.

Completed development of new renewable energies plants

MW_e	**FY 2023**	FY 2022	+/– change	% change
Wind power	218	58	+ 160	>+ 100
Photovoltaics	1,218	418	+ 800	>+ 100
Total	**1,436**	**476**	**+ 960**	**>+ 100**

With our Juwi subsidiary, we offer end-to-end project development and services both in Germany and abroad 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. In future, we will increasingly retain the wind and photovoltaics projects developed by Germany within the Group and thus expand our own generation portfolio. Our Avantag subsidiary supplements our project development business with rooftop photovoltaics in the B2B business, while our Beegy subsidiary offers decentralised renewable energies solutions in the retail and commercial customer business.

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. Volumes may therefore vary widely from year to year. Moreover, changes in underlying conditions, such as 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 2023**	FY 2022	+/– change	% change
Wind power	1,159	1,261	– 102	– 8
Photovoltaics	2,549	2,518	+ 31	+ 1
Total	**3,708**	**3,779**	**– 71**	**– 2**

Supply reliability

Together with other energy companies, MVV has a key role to play in the energy system transformation by making sure that we too invest in the energy infrastructure to prepare this for the energy transition and make it fit for the future. At the same time, we perform what is for society the important task of ensuring that the supply of electricity, gas, heat and water remains reliable and stable. As the volume of electricity fed in from wind turbines or photovoltaics systems fluctuates in line with weather conditions and the time of day, it will be necessary at first to smartly combine renewable energies with highly efficient, flexible and controllable power plants. This makes it possible to provide our customers at all times with a secure and reliable supply of energy.

Supply reliability, always a core topic, has become a key focus of attention again due to the effects of current geopolitical upheavals and the war underway in Ukraine since 2022. Irrespective of these developments, we have always been aware of the importance of this aspect in our area of responsibility. In terms of our district heat supply, we are therefore currently implementing two back-up facilities at our Mannheim location that we will be able to deploy from the 2024 financial year.

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 digitalising, maintaining, expanding and optimising our grids and plants, increasingly also against the backdrop of an acceleration in the electricity and heat transitions.

Diversified generation portfolio

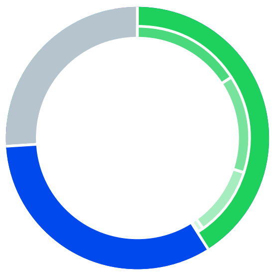
Further progress in converting our generation portfolio
We are working to an increasing extent with renewable and to a decreasing extent with conventional energies. In this, we are relying on a variety of energy sources and technologies. By building a diversified generation portfolio, we are helping 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 2023 financial year, the electricity generated at renewable energies plants (including biomass/biogas and the biogenic share of waste/refuse-derived fuels) accounted for 41 % of our total electricity generation (previous year: 32 %).

Electricity generation

Shares (%)

	FY 2023
Electricity from renewable energies[1]	41
Electricity from wind power	16
Electricity from biomass and biogas plants	14
Electricity from biogenic energy from waste[2]	10
Electricity from photovoltaics	1
Electricity from CHP	33
Other electricity generation	28



1 Due to their immaterial share, electricity generation volumes from hydroelectricity 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 2023**	FY 2022	+/– change	% change
Biomass and biogas plants	482	492	– 10	– 2
Biogenic share of EfW [1]	322	306	+ 16	+ 5
Wind power	548	480	+ 68	+ 14
Hydroelectricity	3	5	– 2	– 40
Photovoltaics	43	12	+ 31	>+ 100
	1,398	**1,295**	**+ 103**	**+ 8**
Electricity from CHP	1,117	1,438	– 321	– 22
Other electricity generation	861	1,345	– 484	– 36
Total	**3,376**	**4,078**	**– 702**	**– 17**

1 Including RDF plants and sewage sludge treatment

The increased generation volumes from wind power result from higher wind volumes, as well as from the fact that we took over a windfarm into our generation portfolio in the previous year. In the year under report, this made its first full-year contribution to our generation volumes. The retirement of wind turbines resulting from the disposal of our shares in Stadtwerke Ingolstadt only reduced our volumes to minor extent. The marked rise in generation volumes from photovoltaics reflects the addition of new capacities to our portfolio. The reduction in generation from combined heat and power (CHP) is due on the one hand to lower electricity generation at our conventional CHP plants and on the other to the disposal of the MVV Energie CZ Group.

Heat generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	**FY 2023**	FY 2022	+/– change	% change
Biomass and biogas plants	107	147	– 40	– 27
EfW [1]	2,358	2,515	– 157	– 6
Green heat generation	**2,465**	**2,662**	**– 197**	**– 7**
Other heat generation [2]	2,915	4,096	– 1,181	– 29
Total	**5,380**	**6,758**	**– 1,378**	**– 20**

1 Including RDF plants and sewage sludge treatment

2 Previous year's figure adjusted

At the end of the 2023 financial year, green heat generation accounted for a 46 % share of our total heat generation volumes (previous year: 39 %). The reduction at our biomass plants is attributable to the sale of the MVV Energie CZ Group. The lower heat generation volumes at our energy from waste (EfW) plants also mainly result from the disposal of the MVV Energie CZ Group. The reduction in other heat generation is due on the one hand to the sale of the MVV Energie CZ Group and of our shares in Stadtwerke Ingolstadt and on the other to lower generation volumes at our conventional CHP plants.

Biomethane generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	**FY 2023**	FY 2022	+/– change	% change
Biomethane generation	259	288	– 29	– 10

The principal cause of the reduction in biomethane generation volumes was a lower level of plant availability compared with the previous year.

Grid stability

Secure 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 of avoiding grid downtime and remedying any downtime as quickly as possible.

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

We are investing large sums in maintaining, modernising and expanding our grids. In the 2023 financial year, these investments totalled Euro 143 million. One key 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.

The management teams at our grid companies are kept regularly informed about interruptions and also discuss this information with the Executive Board. Any countermeasures required are factored into our investment and maintenance projects. Following a very good value in the previous year (10.3), the cumulative SAIDI figure for our grid regions rose to 11.9 in the 2022 calendar year. Overall, we were able to provide 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	**2022** [1]	2021 [1]	+/– change	% change
Electricity at MVV	11.9	10.3	+ 1.6	+ 16
Electricity in Germany [2]	12.2	12.7	– 0.5	– 4

1 Calendar year

2 Source: Federal Network Agency (BNetzA)

Resource efficiency

The consequences of the ongoing growth in global resource consumption 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 attach great importance to efficiency. We minimise the energy losses arising when the fuels are converted into end energy, such as electricity or heat, and consistently invest both in enhancing the energy efficiency of our generation plants and in expanding green heat in conjunction with highly efficient combined heat and power generation. Wherever technically possible, we are also increasingly relying on recycled products and input materials. One key indicator of very high resource efficiency involves the high fuel efficiency rates resulting from optimised use of the energy contained in fuels.

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 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. Another factor that may have a significant influence is the geopolitical situation. 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 MVV's 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 2023	FY 2022	+/– change	% change
Biomass (tonnes 000s)	539	559	– 20	– 4
Waste/RDF (tonnes 000s)	2,015	2,018	– 3	–
Sewage sludge (tonnes 000s)	72	–	–	–
Natural gas (kWh million)	1,982	2,954	– 972	– 33
Hard coal (tonnes 000s)	568	806	– 238	– 30
Other fossil fuels (kWh million)	58	354	– 296	– 84

Low volume of coal use at MVV
We are a minority shareholder in Grosskraftwerk Mannheim AG (GKM), with a 28 % stake, and do not operate this plant ourselves. GKM currently still operates three hard-coal-fired CHP blocks in the market. Due to supply reliability considerations, market operations were temporarily relaunched at Block 7 at the beginning of 2023. This block has now fully returned to the grid reserve at TransnetBW. 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. We are basing our plans and measures on coal-based electricity generation being discontinued by the end of this decade. 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 agreements reached with GKM and its shareholders. We report on the measures with which we will convert district heat generation for Mannheim and the region to 100 % green energy sources by 2030 in the chapter Corporate Strategy.

With its capacity of 60 MW_e, the power plant in Offenbach is now the only hard-coal-fired power plant in our majority-owned conventional generation portfolio. As outlined in the chapter Corporate Strategy and the section Climate Neutrality, we will also convert generation in Offenbach to renewable energies by 2030.

Until the date on which the MVV Energie CZ Group was deconsolidated in December 2022, we operated several small coal-based plants in the Czech Republic to generate and secure the heat supply.

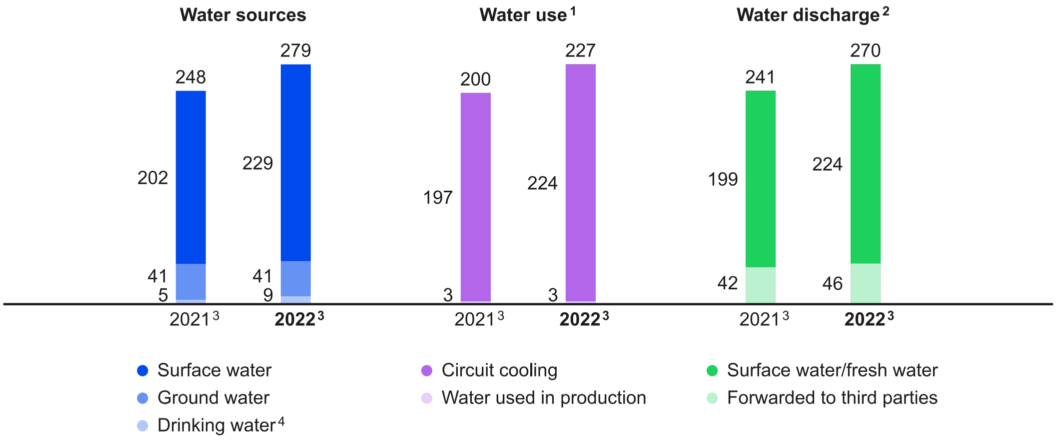
Increased water use required
On a global basis, the availability of clean fresh water and drinking water is an increasingly important topic, partly as a result of climate change and partly due to the increasing overuse of groundwater and surface water. Our subsidiaries MVV Netze and Stadtwerke Kiel play an active role in protecting ground water and water surfaces. As they are responsible for the supply of drinking water in their regions, they regularly analyse and check their supply systems. 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 shows that the majority of our water use relates not to 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 and intend to back this up with more far-reaching activities. We are currently working to further develop our position and strategy for water. We intend to expand our reporting on this in the medium term and, with this aim in mind, have conducted suitable detailed analysis. On an internal basis, for example, we now distinguish for the first time between drinking water that we have produced ourselves and that procured from third parties. We have also for the first time included the water used for circuit cooling in our assessment. The growth in our water footprint in the 2022 calendar year was the result of increased conventional generation in our portfolio. This decreased in the year under report already and we expect this development to continue in the medium to long term. We thus also expect to see a reduction in the associated need for cooling water.

Water volumes

Fully consolidated companies and companies recognised at equity

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
4 Includes drinking water produced internally and procured from third parties.

Local environmental protection

Local environmental protection is a further fixed component of our management systems. 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, 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 at-equity shareholdings are responsible for the operative management of environmental concerns on a decentralised basis. As they work with 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 tense current situation on the energy market and in global supply chains, there is an increasing probability of temporary shortages of specific chemical additives and input materials, such as ammoniac. This in turn could result either in emissions threshold values being temporarily exceeded or in energy generation having to be curtailed. By working with forward-looking procurement, MVV is attempting to mitigate the potential implications of a situation of this kind.

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 locations, we have since 2021 used a single-purpose sewage sludge incineration plant with an annual capacity 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 in the final stage of construction. Here, we will in future recover phosphorous on location from the sewage sludge 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	**2022** [1]	2021 [1]	+/– change	% change
NO_x	2,726	2,970	– 244	– 8
SO_2	715	971	– 256	– 26
Dust	27	28	– 1	– 4
Fly ash	134,538	94,039	+ 40,499	+ 43
Ash and slag	514,136	528,235	– 14,099	– 3

1 Calendar year

Further environmental protection aspects form part of the environmental management systems organised on a decentralised basis at our subsidiaries and at-equity 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. The Kunming-Montreal Agreement, which is intended to intensify worldwide efforts to maintain and re-establish biodiversity, was signed at the World Nature Conference held in Montreal 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 2023 World Risk Report of the World Economic Forum, the loss of biodiversity is already ranked as the fourth-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 also included the topic of biodiversity as one of its five strategic environmental objectives. Under the EU's new Nature Restoration Regulation, a target has been set to restore at least 20 % of the EU's land and sea areas by 2030 and to return all ecosystems to good ecological condition by 2050. Moreover, no further loss of biodiversity should be caused outside the EU. The efforts made by the EU in this area have already resulted in specific legal requirements for companies, such as the obligation to integrate biodiversity as a focus topic in the EU Taxonomy for sustainable investments and in future reporting obligations under the Corporate Sustainability Reporting Directive (CSRD). In connection with these requirements, we will further develop our strategy and measures and report in greater detail on biodiversity.

MVV directly touches upon biodiversity when it builds new or upgrades existing energy infrastructure. When we build our renewable energies plants, for example, we commission surveys to investigate the location-specific impact on the environment and biodiversity. 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 an individual case level. With a view to accelerating the expansion of renewable energies, the Federal Government intends in future, 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, only makes a limited contribution to protecting the climate and 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 at our biomass (CHP) plants. The waste timber we dispose of at our plants 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.

Extreme weather events

As climate change advances, the number of extreme weather events, such as torrential rain, severe wind, flooding or extended periods of heat, is expected to increase in future. These may also impact on MVV, for example in the form of damage to buildings, hazards for employees or interruptions to energy generation or distribution. Based on climate scenarios, we can assess the potential risks at our company's various locations with the assistance of climate risk analysis. In the section EU Taxonomy we report on the details of this analysis, which found that none of the assets that we deploy to perform economic activities is vulnerable to the risks identified and that we have already implemented suitable measures to minimise such risks.

Sustainable circular economy

A sustainable circular economy focuses on closing materials cycles and making effective use of waste, preferably by returning it to the economic cycle as a secondary raw material or, where this is not possible or expedient, by using it to generate energy. This means that, even when it has been correctly separated, household waste and commercial waste is by no means “rubbish”. We make effective use of these valuable commodities 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 business field 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 are currently honing our strategy for the circular economy in connection with the future requirements of the 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 unavoidable waste is free of fossil fuels, then the energy generated at energy from waste plants would be fully regenerative. As well as generating energy, our plants already separate specific materials, such as metals and minerals, and return these to the economic cycle.

Treating unavoidable 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, by avoiding the emissions which would arise from landfilling, incineration makes an active contribution to climate protection.

We incinerated around 1.9 million tonnes of non-recyclable waste and refuse-derived fuels in the 2023 financial year. We operate seven energy from waste plants in Germany and the UK. Due to their deconsolidation in December 2022, the plants at our former subsidiary in the Czech Republic contributed only a prorated share of this total. In Offenbach, we have used a sewage sludge incineration plant to treat municipal sewage since 2021 already. A further such plant at which we will simultaneously recover phosphorous is currently being built at our Mannheim location. Phosphorous is used as a valuable resource in fertiliser production. Together with our customer Olam Food Ingredients (ofi), we took a major step towards greater sustainability in the year under report by launching operations with a unique boiler system on its behalf. With this new steam generation plant, ofi has almost fully converted the supply of process steam at its Mannheim location from gas to the biomass incurred from processing cocoa. The resultant husks are thus used directly on location to generate steam.

Employee concerns aspect

We are part of society at the locations and in the regions where we operate. Our goal is to make positive contributions for our employees and for local populations. We offer attractive and secure jobs to our employees, who number around 6,400, in an environment in which everyone can make their contribution to promoting decarbonisation and upholding supply reliability.

Employee 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.

- Securing specialist staff: We aim to remain an attractive employer. That is why we offer performance-based remuneration packages and are committed to helping our employees combine their work and private commitments. In our recruitment, we are focusing on expanding diversity at the company and here in particular on equal opportunities.

- 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 promoting 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 continuing to shape our company. Mobile work, for example, has become a fixed aspect 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 great personnel recruitment efforts on the market.

- Diversity management: Specialist and talented staff of all genders, age groups, backgrounds and situations should feel they have found the right job at MVV. With "Energy for Diversity", our diversity management programme, we are working consistently and with specific measures to create a suitable environment, structures, and support services for all our employees. **mvv.de/en/vielfalt**

The Executive Board Personnel Director is responsible for all personnel-related activities. Reporting on relevant personnel topics is regularly provided to the full Executive Board 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 **mvv.de/en/supervisory-board** includes equal numbers of shareholder and employee representatives. This means that employee concerns are also central to any important company decisions.

Key figures for year under report

Personnel figures (headcount) at balance sheet date

	30 Sep 2023	30 Sep 2022	+/– change	% change
MVV [1]	**6,390**	**6,556**	**– 166**	**– 3**
of which in Germany	5,833	5,552	+ 281	+ 5
of which abroad	557	1,004	– 447	– 45

1 Including 331 trainees (previous year: 335)

We employed a groupwide total of 6,390 individuals as of 30 September 2023. This reduction is due above all to the sale of the MVV Energie CZ Group. Furthermore, the development in our workforce also reflects higher employee totals in our organic growth fields.

Our international workforce includes 349 employees at Juwi’s shareholdings and 162 at the British subsidiaries of MVV Umwelt.

Training and development

Training with promising prospects for the future
With our broad range of training options – in Mannheim alone, we offer training in 14 different vocations and combined training and study programmes – we provide young people with numerous opportunities to start their career at our company. 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.

We employed a total of 331 trainees at 30 September 2023. We regularly receive large numbers of applications for the training positions we offer, enabling us to fill these with suitable young people.

Targeted personnel development: training concept implemented
We have developed numerous measures and instruments for targeted personnel development. These are based on the experience we have gained in the rapidly changing economic and technological environment in which we operate.

We are consistently upholding our further training concept and offer numerous virtual or in-person seminars on various topics on all levels of the hierarchy.

Our further training measures and a variety of knowledge platforms enable us to ensure a shared skills base for 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 staff development measures at our Mannheim location in the 2023 financial year on the one hand included continuing the General Management series, which is intended to develop our management staff and for which 26 training sessions were held in the year under report. On the other hand, they involve further expanding our IT training for all employees. Here, we added programmes to train employees in preparing and working with data.

In Mannheim, we work with a management review system conducted at intervals of around two years 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. Within a well-established talent management process, we subsequently develop our employees with potential for management positions. More than 40 % of the participants in the 2019 management review now hold management roles or manage major projects. Our talent management activities also extend 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 hold regular appraisals and surveys at our main locations in Germany. This way, our employees have the opportunity to provide honest feedback and we can further enhance the quality of management at our company.

Energy for Diversity

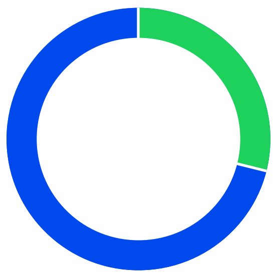
Employees by gender[1]

Shares (%)

	FY 2023
Women	29
Men	71

1 Due to its low percentage, the “diverse” gender category cannot be meaningfully presented in the chart.

Status: 30 September 2023



We are convinced that the company can achieve sustainable business success only if responsibility is assigned to women and men on an equal basis. Not least with a view to demographic change, it makes sense for both social and economic reasons to promote all talents regardless of their gender. Among others, this approach 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. We believe that raising the share of women working at our group of companies in the long term 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 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 2021. Women accounted for 29 % of the Group's employees at the end of the 2023 financial year. Among our management staff, we aim to increase the share of women to 25 %. At the balance sheet date on 30 September 2023, this share stood at 19 %. To achieve our targets by 2026, we are consistently implementing and further expanding our promotional measures and programmes. That is particularly true for our targeted personnel development activities for women with the potential to take on management positions.

We are supplementing existing activities to increase the share of women by implementing measures aimed at raising women's visibility 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 as well, we have set ourselves targets for 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 met by 30 September 2026. In the first management tier, we reached our target prematurely: At 30 September 2023, the share of women amounted to 33 % and was thus already well ahead of the 25 % target. In the second management tier, the share of women stood at 23 % (30 September 2022: 22 %) and was thus slightly higher than in the previous year. We see these increases as confirming the effectiveness of the measures we have drawn on, particularly to further enhance the skills of internal management staff.

We promote equal opportunities and diversity

We are convinced that diversity increases our success. One example: Diverse teams are better able to understand customers' needs and work more creatively on innovative ideas. In the year under report, our Diversity and Prevention central department defined which further aspects of the diversity topic are particularly relevant both to our workforce and to our business success. We will review these aspects in 2026 and at two-yearly intervals thereafter.

Alongside our focus on raising the share of women, we are currently concentrating on the dimensions of social and cultural background, the ability to combine work and personal commitments, and age. To reach the targets we have set ourselves, we are developing and implementing measures relating to our image as an employer, inclusion, equal treatment, recruitment and employer branding, as well as in the fields of employee and cultural development. Working in close cooperation with the specialist departments, we are also planning campaigns and thus promoting achievement of our targets. To raise awareness of diversity on management level at the company, we offer training sessions which address MVV's diversity focuses, unconscious prejudice, judgemental habits and the handling of discrimination or unequal treatment.

We are promoting the exchange of information and experiences between employees in dialogue formats such as "Diversity Talk", in which we look at a variety of diversity-related topics. In addition to our internal mentoring scheme for upcoming managers, we also take part in mentoring programmes for women that are organised in cooperation with other well-known companies in the region. Cooperating this way provides us with valuable ideas from outside the company and enables us to create further offerings. One example is "Spitzenfrauen BW", a regional project for women in Baden-Württemberg which enables us to provide interested women employees with an external network, bespoke seminars and 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, 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; these are explicitly available for our managers as well.

Digitalisation and the use of modern communications appliances also facilitate mobile work in line with specific needs. In the year under report, we performed a mobile work survey of employees at our Mannheim location. The findings have been factored into a new company agreement. Equivalent agreements governing mobile and hybrid work are also in place at our Kiel, Offenbach and Wörrstadt locations. 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 therefore makes it easier for them to return to work more quickly. 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 wish to discuss work-related, family or financial issues.

Another area in which our employees face growing challenges involves caring for relatives. Here too, we are providing them with support. Employees caring for relatives can be granted leave from work. We also inform our staff about nursing care options by holding information events, providing emergency folders with information about work and care and, as is the case at our subsidiary Energieversorgung Offenbach, 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 via our company health management service to help employees preserve their health and further develop their personal skillset, we also draw on a modern knowledge transfer method for employees leaving the company. The expertise they have gained over many years should be retained at the company after their departure. We organise a well-structured and moderated transition and coordinate which knowledge should be transferred, as well as the timeframe and manner in which this should take place. In selected departments in Mannheim, for example, we perform “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

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 enhance 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.

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.

Our goal: zero accidents.

Our accident statistics and the prevention measures taken are evaluated on Executive Board and group level on a monthly 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 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.

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 “Safety Moments”, i.e. 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 personal measures. Together with safety specialists, managers compile 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 the great majority our domestic company departments, these risk assessments are performed and documented digitally. 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.

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

Employees 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 operating instructions that we communicate to our employees, for example in training sessions. We systematically investigate any accidents, near-accidents, unsafe conditions and unsafe actions reported and derive measures where necessary. For all incidents, we consider whether we have to make any amendments to our risk assessments.

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 most frequent types of accident include people stumbling, slipping or falling over, as well as handling-related accidents. The assessment and evaluation are performed on a gender-neutral basis and in line with data protection requirements. We also assess the expediency of further preventative measures.

Accident statistics

	FY 2023	FY 2022	+/– change	% change
Lost time injury frequency rate (LTIF) [1, 2, 3]	4.3	3.7	+ 0.6	+ 16
Fatal accidents	0	0	0	0

1 Includes all fully consolidated companies in Germany (new fully consolidated companies only included in accident statistics at the earliest in the 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 (corresponds to 1 FTE)

With an LTIF of 4.3, the accident frequency was higher than the previous year’s figure of 3.7. We have taken additional measures to raise awareness for potential accident risks. There were no accidents with fatal consequences in the year under report.

Health protection

We aim to preserve and promote the health of our workforce by offering a range of targeted services and preventative medical care. We also attach great value to raising awareness for our employees’ mental and physical wellbeing. With the wide variety of measures offered by our company health management services, the information, events and fitness formats provided online and the extensive offerings available at company medical services at our larger locations, we provide our employees with numerous health promotion options.

Social concerns aspect

Corporate social responsibility

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 therefore 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, preferably to local or regional businesses, 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.

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 operate at various locations and in diverse business fields and therefore account for the interests of numerous, often heterogeneous groups of stakeholders. These include our customers, employees, shareholders, government and political representatives, as well as non-government organisations (NGOs), the media, analysts, local residents at our locations, 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. We focus here on the energy system transformation.

Via our membership in industry associations, we participate in energy policy and energy industry discussions. In some cases, experts from MVV participate in the specialist and management boards, and thus in the respective opinion-forming processes, at these organisations. In the Association of the German Energy and Water Industries (BDEW), our CEO Dr. Georg Müller is a member of the Association's Board. Moreover, senior MVV employees are involved in the BDEW Steering Committees for Energy and Environmental Policy, Sales and District Heat. Our Executive Board member Dr. Hansjörg Roll is the President of the German Energy Efficiency Association for Heating, Cooling and CHP (AGFW). Examples of further associations and stakeholder groups of which we were members in the 2023 financial year are: the Federation of the German Waste, Water and Raw Materials Management Industry (BDE), the German Energy Storage Systems Association (BVES), the German Geothermal Association (BVG), the German Association of Energy Market Innovators (bne), the German Wind Energy Association (BWE), the German Association of Waste-to-Energy Plants (ITAD), the German Association for Electrical, Electronic and Information Technologies (VDE), the Baden-Württemberg Association of the Energy and Water Industries (VfEW), the German Association of Public Utilities (VKU) and the Technical Association for the Generation and Storage of Electricity and Heat (vgbe). Furthermore, MVV is a member of the 8KU Group, in which eight large municipal utility companies in Germany have joined forces to communicate their specific concerns in the political arena. Dr. Georg Müller has been entrusted with coordinating the activities of 8KU in 2023.

Local communities

We have the responsibility to use our resources to make the energy system more sustainable and efficient and, to this end, maintain an open exchange of ideas 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 adopt a project-specific approach which is handled on a decentralised basis by our subsidiaries and shareholdings.

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. We channelled our energies into promoting such acceptance once again in the 2023 financial year.

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 anti-corruption 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 and the environment.

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

Most of our procurement volumes involve energy carriers such as electricity and natural gas. In recent years, there has been increasing public interest in the greenhouse gas emissions resulting from the production and transport of natural gas. This particularly relates to imported liquefied natural gas (LNG). The topic of energy security remained highly important in the year under report. In Germany, the permanent discontinuation of Russian gas supplies has mostly been offset with LNG. Depending on the procurement source, this may give rise to other ecological issues which we analyse very closely.

We occasionally receive enquiries as to the origin of the hard coal used at our 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 64 thousand tonnes of hard coal in the year under report. This hard coal mainly comes from Latin and North 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. The power plant Grosskraftwerk Mannheim AG (GKM), where we are minority shareholders, also makes use of hard coal. As we ourselves do not operate the plant, we have no direct influence on business activities and fuel activities. We are nevertheless aware of our responsibility and endeavour to ensure that the coal industry respects human rights and makes a positive contribution to the social and economic livelihoods of workers, producers and communities by discussing sustainability topics closely with GKM and requesting information. GKM has been a member of the Better Coal Initiative since March 2021. We take due account of the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG) **mvv.de/en/LkSG.**

Low volume of non-commodities

Apart from energy procurement our other procurement volumes are comparatively low, correspondding to only around one fifth of our commodity procurement. They mostly involve procuring goods, construction services 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. Here, we also perform a detailed analysis of the CO_2 footprint of the products and solutions we procure and account for these in our climate balance sheet. The cross-location team of experts we have established for this purpose acts early to assess legal requirements, discusses these and the latest developments in central procurement and implements measures to shape further developments. This team of experts includes procurement staff, lawyers, our Human Rights Officer and our sustainability management. In a process managed by this expert team, our suppliers are subject to an automated risk review which compiles individual profiles of human rights and environmental-related risks.

In the year under report, we joined the sector dialogue of the German energy industry concerning respect for human rights along global supply and value chains. Supported by the Federal Government, this forum for sharing information enables industry representatives and members of society to investigate relevant potential violations of human rights along global supply chains and to analyse how the human rights-related situation could be improved. One topic that was again relevant in the year under report involved potential human rights violations in the production of photovoltaics modules in China. This risk is not specific to MVV's 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 direct 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

We accord high priority to respecting human rights and compliance with legal requirements in our cooperation with our suppliers. We deploy supplier management systems and expect all our suppliers to commit to adhering to our compliance requirements, particularly those relating to anticorruption measures, environmental protection, respect for human and workers' rights in the supply chain and the acceptance of responsibility towards society. The basis for our cooperation with suppliers and service providers in Germany and the European Union is provided by applicable laws and regulations, including the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG), which has applied to us since 1 January 2023, as well as 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 Business Code of Conduct; this is published on our website at **mvv.de/en/compliance.** If these obligations are breached, then contractual sanctions, including contractual penalties, termination and damages payments, are provided for. To implement the risk analysis requirement of the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG), we have introduced an AI-assisted process and established supplier risk management connected to this. This enables us to detect, avoid, terminate or minimise and violations by our suppliers of human rights and/or human rights-related environmental protection requirements and to draw consequences in the event of such violations. This process already accounts for the requirements contained in the draft version of the EU Corporate Sustainability Due Diligence (CSDD) Directive.

Suppliers to MVV Energie AG, Energieversorgung Offenbach, Juwi and Stadtwerke Kiel are 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.

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 and the UK, 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. Acquisitions 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 keep comprehensive records of working conditions at our subcontractors, especially at their production locations, but draw here too on external sources of information.

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.

In our Compliance Handbook, we have summarised the most important rules, requirements and the organisational structures and responsibilities required to comply with these, as well as stating and providing a detailed description of the processes in our reporting system. The handbook is binding for all companies at the Mannheim subgroup of MVV Energie AG and is permanently available to all employees at this subgroup. The other subgroups have introduced equivalent compliance management systems.

Our Compliance Officer is responsible for the CMS with regard to its contents, organisation and processes. She compiles the relevant compliance requirements, updates these and exchanges information about them with the various organisational units. Moreover, she is responsible for ensuring that employee training measures are implemented and that adherence to the compliance requirements is monitored. Furthermore, she 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 aim to avoid any infringements of compliance requirements on a preventative basis.

We have structured our CMS in such a way that any infringements 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.

By embedding active prevention measures within business processes, we are committed to averting any criminal or grossly improper violations of the law. In particular, we maintain 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 bribery and the granting of advantages.

We take all measures necessary to prevent money laundering and terrorism financing. Given its products, customer base and geographical scope 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 screen our business partners against the relevant sanctions lists with the assistance of an IT tool.

Employees and third parties can contact the Compliance Officer or an external confidence lawyer directly and, if preferred, anonymously via “whistle-blower” hotlines and provide tip-offs of potential misconduct. We have published all necessary information and the telephone number of our confidence lawyer, also on our website at **mvv.de/en/whistleblower-hotline.**

Regular training is provided to all MVV 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 topics 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 2023 financial year, 487 employees at the Mannheim subgroup and 385 employees at the other subgroups took part in this training. The majority of these training sessions were held as in-person events. In parallel, over the same period 4,669 individuals completed an e-learning training module offered by our subsidiaries Stadtwerke Kiel, Energieversorgung Offenbach and Juwi.

Managers in the first management tier 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 Policy Statement on Respect for the Environment and Human Rights **mvv.de/en/LkSG,** we underline our commitment to internationally recognised principles of human rights and take due account of the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG). The Policy State-ment 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 implementing and monitoring the risk management activities required to meet the due diligence obligations imposed by the LkSG legislation. Among other aspects, this involves performing a human rights risk analysis each year and on specific occasions. This analysis covers the company's own business activities, as well as those of suppliers, and also involves defining measures 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, the Human Rights Officer is the first person to turn to for employees. Not only that: In the event of potential violations, she 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.

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

In the year under report, we further developed the risk analysis 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. In this year's process 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.

EU Taxonomy

The Sustainable Finance Action Plan (SFAP) plays a key role within the EU's Green Deal. It is intended to direct 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 Regulations, 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 (CCM)
- 2. Climate change adaptation (CCA)
- 3. Sustainable use and protection of water and marine resources (WTR)
- 4. Transition to a circular economy (CE)
- 5. Pollution prevention and control (PPC)
- 6. Protection and restoration of biodiversity and ecosystems (BIO)

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

Taxonomy-eligible economic activities are those economic activities of a company for which final technical screening criteria are stated in the annexes to Delegated Regulations EU 2021/2139, EU 2022/1214, EU Document C(2023) 3850 final and EU 2023 Document C(2023) 3851 final. This classification is irrespective of whether 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 Delegated Regulations EU 2021/2139, EU 2022/1214, EU Document C(2023) 3850 final and EU Dokument C(2023) 3851 final and which 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 first, the classification criteria for the first two environmental objectives, namely "climate change mitigation" and "climate change adaptation" were laid down in Delegated Regulation EU 2021/2139. This took effect as of 1 January 2022. In early March 2022, the European Commission published a complementary Delegated Regulation EU 2022/1214 on the environmental objectives of "climate change mitigation" and "climate change adaptation". This defines the criteria which, if met, sales ("turnover"), investment expenses ("CapEx") and operating expenses ("OpEx") in gas and nuclear energy activities may 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. This complementary Regulation has required mandatory application since 1 January 2023. In Delegated Regulation EU Document C(2023) 3851 final, adopted at the end of June 2023, the EU Commission also approved the classification criteria for the four other environmental objectives of "sustainable use and protection of marine resources", "transition to a circular economy", "pollution prevention and control" and "protection and restoration of biodiversity and ecosystems". Furthermore, Delegated Regulation EU Document C(2023) 3850 final extended the range of economic activities making a substantial contribution to the "climate change mitigation" and “climate change adaptation” objectives and clarified detailed issues relating to the regulation. These Delegated Regulations are scheduled to take effect as of 1 January 2024; upon the editorial deadline, they had not yet been published in the Official Journal of the European Union. Upon the expiry of the relevant deadline, no objections were known to have been raised by the European Parliament or the EU Council.

Pursuant to the Taxonomy Regulation, the EU Commission will review and update the technical screening criteria at regular intervals in future as well. It is therefore a dynamic set of regulations. This process is intended to integrate technical advances, new scientific findings and EU policy developments.

Implementation of EU Taxonomy at MVV

For the 2023 financial year, MVV is obliged to report on its taxonomy-eligible and taxonomy-aligned economic activities in the “climate change mitigation” and “climate change adaptation” environmental objectives, as well as on their respective shares of its turnover, CapEx and OpEx. With regard to the economic activities identified for the first time in the previous year, we have now implemented a regular process which subjects the disclosures and their current status to specialist review. Over and above the statutory disclosures, for the 2023 financial year we have also already reported on a voluntary and comprehensive basis on our taxonomy-eligible and taxonomy-aligned economic activities in the “sustainable use and protection of water and marine resources”, “transition to a circular economy”, “pollution prevention and control” and “protection and restoration of biodiversity and ecosystems” environmental objectives, as well as on their respective shares of turnover, CapEx and OpEx. MVV is thus one of the first companies in Germany to report in full on the currently known and future requirements of the EU Taxonomy.

The EU Taxonomy and the supplementary Delegated Regulations only record select economic activities. This means that we are unable to classify some activities as taxonomy-eligible which we believe make a key contribution to the environmental objectives, and in particular to climate change mitigation. One example: New BECCUS (Bio-Energy Carbon Capture Utilisation & Storage) technologies, which make it possible to withdraw carbon from the atmosphere, are currently not included in the EU Taxonomy. For MVV, however, they constitute an important factor as we head for a #climatepositive future. To withdraw carbon from the carbon cycle, for example, we intend to implement carbon capture (CC) by supplementing the technology at our energy from waste plants. We report on these activities in various sections of this report, including in the Environmental Concerns Aspect section of this Non-Financial Declaration.

Identification and classification of our economic activities

We began by analysing all MVV’s economic activities on the basis of the descriptions provided in the Delegated Regulations and their 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 2023 financial year that the economic activities thereby identified contribute to the “climate change mitigation”, “sustainable use and protection of water and marine resources”, “transition to a circular economy” and “pollution prevention and control” environmental objectives. The environmental sustainability review also ascertained that our economic activities do not make any contribution to the second environmental objective, namely “climate change adaptation”. Furthermore, due not least to the limited range of economic activities described to date we have not identified any taxonomy-eligible economic activities for the sixth environmental objective, namely “protection and restoration of biodiversity and ecosystems”.

In the next step, all economic activities identified were subject to a taxonomy alignment review:

Review step 1: substantial contribution to the environmental objectives
We individually review each of our taxonomy-eligible economic activities by reference to the technical screening criteria pursuant to the relevant articles of the Delegated Regulations to the EU Taxonomy in conjunction with the associated annexes to ascertain whether they make a substantial contribution. The initial recording and review of economic activities in terms of their taxonomy alignment is performed with the assistance of uniform assessment forms across the Group. We devised these on the basis of the Delegated Regulations and the relevant annexes. They serve as worksheets and documentary evidence. We accompany the subsequent process for the annual specialist current status review with our EUT management system. We manage the review process centrally, while the review of the respective economic activity takes place on a decentralised basis at the organisational unit responsible for the activity.

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. For the six environmental objectives, the DNSH criteria set out in the annexes and appendices to Delegated Regulations EU 2021/2139 and EU Document C(2023) 3851 final chiefly relate to compliance with European and/or German legal requirements. For MVV’s taxonomy-eligible activities, the Delegated Regulations do not define any requirements concerning the avoidance of significant harm for the “climate change mitigation” environmental objective.

Due to our energy industry activities, the review of DNSH conformity concerning the avoidance of significant harm to the “climate change adaptation” environmental objective formed the key focus of our DNSH review process. To determine conformity pursuant to the annexes and appendices to Delegated Regulations EU 2021/2139 and EU Document C(2023) 3851 final, it is necessary to assess the physical climate risks. This is based on the findings of a climate risk model and climate risk analysis we performed with external climate risk experts. In this, the risk for a location or region in which we perform an economic activity was assessed for 15 climate risks based on various climate scenarios. This conformity assessment also involved performing climate projections relating to the scope of the activity and to the expected lifetime of such activity. Based on our uniform assumption of a 30-year lifecycle, we flexed the assessment to factor in high-resolution and state-of-the-art climate projections for the existing series of future scenarios.

We performed a separate assessment for each risk. Depending on the individual data situation, the RCP scenarios (2.6, 4.5, 6.0 and 8.5 – explained below) are converted from climatological forecasts, such as precipitation or global radiation, into physical risks. The calculation of climate risks due to extreme weather events covers the period until 2052. Implementation is aligned to the individual steps stated in the EU Taxonomy and is based on the following logic:

- Based on the data sources suggested by the EU, in a first step we identified those risks that are basically possible for the locations or regions stated due to extreme weather events. The primary data source we referred to was the database of the Copernicus Climate Change Service listed in Delegated Regulations EU 2021/2139 and EU Document C(2023) 3851 final.

- We subsequently used the four representative concentration pathways (RCP) for the scenario projection in order to identify possible future changes on a location-specific basis and to derive the resultant climate risks.

- To enhance the comparability of various studies, the International Panel on Climate Change (IPCC) developed the RCP scenarios to provide the scientific community with a shared set of assumptions concerning possible climate change developments. The term “concentration pathway” is intended to underline that the scenarios are aligned to select chronological sequences in greenhouse gas concentrations and the underlying socio-economic models. We refer to four scenarios defined by the IPCC, namely 2.6, 4.5, 6.0 and 8.5, which are applied in the annexes and appendices to Delegated Regulations EU 2021/2139 and EU Document C(2023) 3851 final of the EU Taxonomy. These four scenarios are described as follows: In each scenario, the projection reflects the scope of global mitigation strategies in respect of climate change. Scenario RCP 2.6, for example, presupposes significant efforts in this area, while Scenario RCP 8.5 assumes that CO_2 emissions will triple by the end of the century due to the absence of any mitigation measures. Scenario RCP 4.5 sets out a medium scenario in which fossil fuels are used until the middle of the century while also accounting for mitigation strategies. In Scenario RCP 4.5, emissions peak around 2040 and then decline. Scenario RCP 6.0 outlines a pathway similar to Scenario RPC 4.5, but here emissions only peak in 2080. The figures do not outline the expected rise in temperature; the increase in temperature is rather the consequence of the radiative forcing expressed by the figures due to increased concentrations of greenhouse gases in the atmosphere. The figures refer to the cumulative total volume by 2100 and the resultant radiative forcing. In addition, a rise in global mean temperatures can be allocated to each RCP Scenario. Scenario RCP 8.5 corresponds to an increase of around 4.8°C compared with preindustrial levels. In Scenario RCP 6.0, mean temperatures rise by between 3 °C and 4 °C by 2100. In the medium Scenario RCP 4.5, global warming reaches 2.6 °C compared with preindustrial levels. In Scenario RCP 2.6, by contrast, the average rise in global temperatures forecast by the model remains below the 2-degree Paris target.

- Due to circumstances at the locations and the specific features of the assets used to perform the economic activity, despite the risks identified for the respective location the assets may possibly not be vulnerable to such risks. We investigated this aspect in a second stage. For the locations thereby affected, we assessed the findings in cooperation with the directors of the respective location to ascertain whether any vulnerability to the identified risks that could negatively affect the economic activity actually applies. Where this is the case, in a third stage we evaluated whether any suitable risk-minimising measure is already in place. Depending on the risk, this may take a variety of forms and may involve structural or non-structural measures.

Overall, it was established that, for all assets we deploy to perform our economic activities, there is either no vulnerability to the risks identified or suitable risk-minimising measures (adaptation solutions) are already in place.

With regard to the avoidance of significant harm to the “sustainable use and protection of water and marine resources” environmental objective, the Delegated Regulations require those economic activities whose construction or operation may impact on existing water to meet specific criteria. We document that these criteria are met on the level of individual projects and plants, for example by liaising with the relevant authorities to allow inspection of approval applications, environmental reviews and approval conditions relating to water. We document, also on individual project and plant level, that we have met the criteria governing the avoidance of significant harm to the “transition to a circular economy” environmental objective by setting out our specific measures relating to the circular economy. To show the avoidance of any significant harm to the “pollution prevention and control” environmental objective, we document that we have met the criteria by presenting application approvals, environmental reviews and approval conditions for individual projects and plants. With regard to the “protection and restoration of biodiversity and ecosystems” environmental objective, the Delegated Regulations require criteria to be met for all our activities. We demonstrate that we satisfy these criteria by documenting our compliance with the approval process requirements, for example by granting access to the findings of environmental reviews.

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 (“minimum safeguards”)

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 placed in this respect by our compliance management system (CMS), which we report on in the Compliance section 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 into our CMS. With our Policy Statement on Respect for the Environment and Human Rights and 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 MVV Business Code of Conduct for our suppliers and business partners. Moreover, we further developed our risk analysis process and other supply chain-related processes in our “Sustainable Supply Chain” workgroup, which covers activities in our business fields and our locations. “Potential violations of human rights in the photovoltaics supply chain”, which was a relevant topic in the year under report, was also subject to close risk monitoring, with suitable precautionary measures taken. We report on this in the Respect for Human Rights and Combating Corruption and Bribery Aspect section of this Non-Financial Declaration.

We promote employee awareness of the importance of compliance with all applicable competition laws and regulations. Neither the company nor its senior management have bene finally convicted either of violating tax or 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 2023 financial year, we identified the following economic activities as being taxonomy-aligned:

Overview of all taxonomy-aligned economic activities FY 2023

Economic activity pursuant to EU Taxonomy		Environmental objective	MVV’s activity [1]
4.1.	Electricity generation using solar photovoltaic technology	Climate change mitigation (CCM)	Projecting and construction of photovoltaics parks and generation of electricity from photovoltaics systems
4.3.	Electricity generation from wind power	Climate change mitigation (CCM)	Projecting, construction and generation of electricity from onshore wind turbines
4.5.	Electricity generation from hydropower	Climate change mitigation (CCM)	Generation of electricity from hydropower plants
4.8.	Electricity generation from bioenergy	Climate change mitigation (CCM)	Generation of electricity from biomethane and biogas plants
4.9.	Transmission and distribution of electricity	Climate change mitigation (CCM)	Distribution grid operator for electricity
4.11.	Storage of thermal energy	Climate change mitigation (CCM)	Use of heat storage facilities
4.13.	Manufacture of biogas and biofuels for use in transport and of bioliquids	Climate change mitigation (CCM)	Biomethane production
4.14.	Transmission and distribution networks for renewable and low-carbon gases	Climate change mitigation (CCM)	Distribution grid operator for green gases
4.15.	District heating/cooling distribution	Climate change mitigation (CCM)	District heat supply
4.16.	Installation and operation of electric heat pumps	Climate change mitigation (CCM)	Construction and operation of a river heat pump
4.20.	Cogeneration of heat/cool and power from bioenergy	Climate change mitigation (CCM)	Electricity generation using CHP at biomass plants
4.24.	Production of heat/cool from bioenergy	Climate change mitigation (CCM)	Heat generation at biomass plants
4.25.	Production of heat/cool using waste heat	Climate change mitigation (CCM)	Use of waste heat for district heat supply
4.30. [2]	High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	Climate change mitigation (CCM)	Coastal power plant in Kiel
4.31.	Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	Climate change mitigation (CCM)	Gas-based backup facilities for district heat supply
5.7.	Anaerobic digestion of bio-waste	Climate change mitigation (CCM)	Biomethane production from bio-waste
6.15.	Infrastructure enabling low-carbon road transport and public transport	Climate change mitigation (CCM)	Public charging infrastructure activities
7.3.	Installation, maintenance and repair of energy efficiency equipment	Climate change mitigation (CCM)	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 (CCM)	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 (CCM)	Meter operations
7.6.	Installation, maintenance and repair of renewable energy technologies	Climate change mitigation (CCM)	Installation of photovoltaics systems for business, commercial and retail customers
9.3.	Professional services related to energy performance of buildings	Climate change mitigation (CCM)	Energy efficiency consulting for business, commercial and industrial customers
2.1. [2]	Water supply	Water and marine resources (WTR)	Water production and supply
2.1. [2]	Phosphorous recovery from waste water	Circular economy (CE)	Phosphorous recycling plants
2.7. [2]	Sorting and material recovery of non-hazardous waste	Circular economy (CE)	Recovery of secondary raw materials at energy from waste plants
2.2. [2]	Treatment of hazardous waste	Pollution (PPC)	Treatment of hazardous waste timber

1 Our plants are subject, among other legislation, to the strict requirements of the German Federal Immission Control Ordinances (BImSchV) enabling us to safeguard compliance with the relevant DNSH criteria.

2 Economic activities newly added in year under report

For the 2023 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 2023

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

Calculation and definition of EU Taxonomy KPIs

We based our calculation of taxonomy-eligible and taxonomy-aligned shares on the following approach: Key performance figures (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, we safeguard process conformity 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 section 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 2023 financial year. Further information about MVV's investments can be found in the section Presentation of Asset Position.

Reconciliation of investment expenses

Euro million	FY 2023	FY 2022	+/– change
Investment expenses pursuant to EU Taxonomy Regulation	**344**	**350**	**– 6**
+ Unfinished products in connection with finance leases	+ 12	+ 5	+ 7
+ Financial assets	+ 11	+ 37	– 26
– Dismantling obligations	– (– 1)	– (– 6)	– 5
– Right-of-use assets	– 19	– 18	– 1
– Company acquisitions	– 5	– 45	+ 40
Investments pursuant to MVV definition	**344**	**335**	**+ 9**

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 2023 financial year, virtually all our taxonomy-eligible investment expenses were also taxonomy-aligned. The numerator thus represents "CapEx Category a" as defined in Delegated Regulations EU 2021/2178.

According to Delegated Regulations EU 2021/2178, 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 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 2023 financial year concluded that they account for significantly less than 1 % of our total investments. We therefore do not include any CapEx in Category c in the numerator.

The numerator and denominator used to calculate the **operating expenses** KPI are defined in the Delegated Regulations EU 2021/2178. 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 Categorie a”.

Pursuant to Delegated Regulations EU 2021/2178, 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 2023 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 2023 Euro million	FY 2022 Euro million	+/– change	**FY 2023 Share %**	FY 2022 Share %
Total sales (turnover)	**7,531**	**4,199**	**+ 3,332**	**100.0**	**100.0**
of which taxonomy-eligible	1,290	934	+ 356	17.1	22.2
of which taxonomy-aligned	1,238	756	+ 482	16.4	18.0
Total investment expenses (CapEx)	**344**	**350**	**– 5**	**100.0**	**100.0**
of which taxonomy-eligible	271	264	+ 6	78.6	75.6
of which taxonomy-aligned	268	262	+ 6	77.7	74.9
Total operating expenses (OpEx)	**682**	**584**	**+ 97**	**100.0**	**100.0**
of which taxonomy-eligible	177	159	+ 18	26.0	27.3
of which taxonomy-aligned	173	156	+ 17	25.4	26.6

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 section Presentation of Earnings Performance). These business activities are not recorded as economic activities in the EU Taxonomy. Although we identified four further economic activities in the year under report, it is still the case that only a minor share of our sales is within the scope of the EU Taxonomy and thus taxonomy-eligible.

Our taxonomy-aligned sales rose by Euro 482 million compared with the previous year, equivalent to an increase of 64 %. The largest sales contributions are attributable to the installation of photovoltaics systems for business, commercial and retail customers (EA 7.6 Climate Change Mitigation), our activities in the distribution of electricity and supply of district heat (EA 4.9, 4.15 Climate Change Mitigation) and the newly added activity of secondary materials recovery at our energy from waste plants (EA 2.7 Circular Economy). The year-on-year increase in taxonomy-aligned sales is due on the one hand to the newly added activity of secondary materials recovery at our energy from waste plants (EA.2.7 Circular Economy) and on the other hand to higher sales with the installation of photovoltaics systems for business, commercial and retail customers (EA 7.6 Climate Change Mitigation).

Overall, the volume of sales in the numerator of the calculation (total of adjusted sales with taxonomy-eligible and taxonomy-aligned economic activities) increased compared with the previous year.

Taxonomy-eligible economic activities accounted for a 17 % share of sales in the 2023 financial year (previous year: 22 %). Of these, 96 % are also taxonomy-aligned and thus environmentally sustainable (previous year: 81 %). The year-on-year reduction in the shares of taxonomy-eligible and taxonomy-aligned economic activities in our sales is due to the fact that the significant increase in our overall sales was driven above all by trading with commodities.

For individual economic activities, such as the operation of our natural gas distribution grids (EA 4.14), the taxonomy requirements merely permit the recognition of investments and do not allow any sales to be stated.

Sales (turnover)

Shares (%)

	FY 2023
of which taxonomy-aligned	16
of which taxonomy-eligible	17
of which non-taxonomy-eligible/ not classified by EU Taxonomy	83

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 decarbonisation and sustainability targets (please also see the comments provided in the Environmental Concerns Aspect section of this Non-Financial Declaration). However, not all of these investments are covered by the EU Taxonomy.

We made taxonomy-aligned investments of Euro 268 million in the year under report (previous year: Euro 262 million). Most of these investments involve projects which contribute to climate protection. Above all, these involve investments in supply reliability which demonstrably lead to reductions in CO_2 emissions, i.e. investments in activities relating to the distribution of electricity (EA 4.9 Climate Change Mitigation) and the supply of district heat (EA 4.15, 4.25 and 4.31 Climate Change Mitigation), as well as investments in the installation of photovoltaics systems for business, commercial and retail customers (EA 7.6 Climate Change Mitigation).

Overall, the volume of investment expenses in the numerator of the calculation (total investment expenses for taxonomy-eligible and taxonomy-aligned economic activities) increased compared with the previous year.

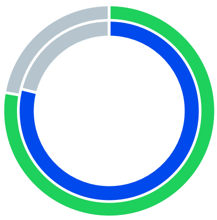
In the 2023 financial year, 79 % of our investments were within the scope of the EU Taxonomy and thus taxonomy-eligible (previous year: 76 %). At 99 %, almost all taxonomy-eligible investment expenses were also taxonomy-aligned. These therefore count as environmentally sustainable investments.

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. We expect investment contributions from individual economic activities to fluctuate sharply between individual years. That is because they depend on the implementation of larger-scale projects and the EU Taxonomy assesses CapEx solely on the basis of additions in the year under report.

Investments (CapEx)

Shares (%)

	FY 2023
of which taxonomy-aligned	78
of which taxonomy-eligible	79
of which non-taxonomy-eligible/ not classified by EU Taxonomy	21



Operating expenses

At Euro 173 million, our taxonomy-aligned operating expenses in the year under report were Euro 17 million higher than in the previous year. The largest items related to the installation of photovoltaics systems for business, commercial and retail customers (EA 7.6 Climate Change Mitigation), to our activities in the distribution of electricity (EA 4.9 Climate Change Mitigation) and to the newly added economic activity of secondary materials recovery at energy from waste plants (EA 2.7 Circular Economy).

Overall, the volume of operating expenses in the numerator of the calculation (total operating expenses for taxonomy-eligible and taxonomy-aligned economic activities) increased compared with the previous year.

Of operating expenses in the 2023 financial year, 26 % were within the scope of the EU Taxonomy (previous year: 27 %). Of the taxonomy-eligible operating expenses, 98 % were also taxonomy-aligned (previous year: 98 %). 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 2023
of which taxonomy-aligned	25
of which taxonomy-eligible	26
of which non-taxonomy-eligible/ not classified by EU Taxonomy	74

Business Performance of MVV Energie AG

Executive summary

The MVV Group's highly positive earnings performance is also reflected in earnings at MVV Energie AG. Earnings here benefited not only from disposal gains due to the sale of the Czech MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt, but also from exceptionally high earnings contributions from the energy trading business due to the marketing of renewable energies and portfolio management activities.

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). MVV's consolidated financial statements are prepared in accordance 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 2023 financial year are published in the Federal Gazette (Bundesanzeiger). The complete 2023 annual financial statements of MVV Energie AG can be downloaded at **mvv.de/en/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. Due to cost allocations resulting from the acceptance of electricity and district heat, this led to additional expenses in a medium single-digit million amount at MVV 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 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022
Sales	2,842,203	2,813,211
Less electricity and natural gas taxes	– 122,068	– 126,701
Sales less electricity and natural gas taxes	**2,720,135**	**2,686,510**
Increase or reduction in finished and unfinished products	–125	173
Other own work capitalised	94	81
Other operating income	224,863	60,685
Cost of materials	2,460,419	2,465,694
Employee benefit expenses	97,460	81,975
Depreciation and amortisation	23,253	21,356
Other operating expenses	162,224	130,698
Financial result	127,089	101,220
Taxes on income	137,415	31,296
Earnings after taxes	**191,285**	**117,650**
Other taxes	665	421
Annual net income	**190,620**	**117,229**
Allocations to other revenue reserves	95,055	48,027
Unappropriated net profit	**95,565**	**69,202**

Sales less energy taxes at MVV Energie AG grew year-on-year by Euro 34 million to Euro 2,720 million. This growth was due to higher gas revenues resulting from an increase in average prices, as well as to higher sales from the provision of CO_2 rights. This was countered by a reduction in electricity revenues due to volatile but lower prices on the energy markets. The company generated its sales exclusively in Germany. The electricity business accounted for 63.6 % of total sales (previous year: 68.0 %) and thus remains the largest division in terms of sales at MVV Energie AG.

At Euro 2,460 million, cost of materials were Euro 5 million lower than in the previous year. The change in this line item largely reflects the development in sales. Electricity procurement in particular, however, showed a more marked proportionate reduction than electricity revenues, leading to the slight overall decrease in cost of materials.

Other operating income rose by Euro 164 million to Euro 225 million. This increase was due above all to the disposal of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt.

MVV Energie AG had 912 employees at 30 September 2023, 12 more than at the previous year's balance sheet date. Due to higher personnel provisions and corresponding items in the previous year, the employee benefit expenses of Euro 97 million were Euro 15 million higher than in the previous year.

At Euro 23 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 32 million to Euro 162 million. This change was chiefly due to higher expenses for billing services, as well as to the expenses incurred to establish a charitable foundation to mark the 150th anniversary of MVV and its predecessor companies.

The financial result rose year-on-year by Euro 26 million to Euro 127 million. This development was due above all to higher amounts of profit transferred, particularly from the MVV Trading GmbH subsidiary.

At Euro 191 million, earnings after taxes were Euro 74 million higher than in the previous year. After the deduction of other taxes, MVV Energie AG generated annual net income of Euro 191 million in the 2023 financial year and thus exceeded its forecast that annual net income would approximately match the previous year's figure. This was chiefly attributable to the disposal in the year under report of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt. Based on the profit utilisation resolution adopted by the Annual General Meeting on 10 March 2023, 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 95 million were formed from the annual net income for the year under report. MVV Energie AG reported unappropriated net profit of Euro 96 million at 30 September 2023. The Annual General Meeting to be held on 8 March 2024 will decide on the dividend proposal adopted by the Executive and Supervisory Boards. The proposal to be submitted by the Executive Board for approval by the Annual General Meeting provides for the distribution of a dividend of Euro 1.15 per share (previous year: Euro 1.05 per share) and of a one-off dividend of Euro 0.30 per share to mark the 150th anniversary of MVV and its predecessor companies and the company's exceptional earnings performance. The Supervisory Board will decide on its dividend proposal in December 2023.

Presentation of asset and financial position of MVV Energie AG

Balance sheet

Euro 000s	**30 Sep 2023**	30 Sep 2022
Assets		
Non-current assets		
Intangible assets	561	341
Property, plant and equipment	586,587	543,035
Financial assets	1,617,803	1,733,828
	2,204,951	**2,277,204**
Current assets		
Inventories	221	865
Receivables and other assets	880,514	645,818
Cash and cash equivalents	518,993	939,093
	1,399,728	**1,585,776**
Deferred expenses and accrued income	131	510
	3,604,810	3,863,490
Equity and liabilities		
Equity		
Share capital	168,721	168,721
Capital reserve	458,946	458,946
Revenue reserves	694,939	599,884
Unappropriated net profit	95,565	69,202
	1,418,171	**1,296,753**
Income grants received	34,728	36,418
Provisions	154,586	104,204
Liabilities	1,990,116	2,423,112
Deferred tax liabilities	7,209	3,003
	3,604,810	**3,863,490**

Total assets decreased year-on-year by Euro 259 million to Euro 3,605 million, a development driven above all by lower prices on energy markets compared with the previous year.

The asset side of the balance sheet is largely shaped by financial assets. At 30 September 2023, these totalled Euro 1,618 million, equivalent to a 45 % share of total assets. The figures for the previous year were Euro 1,734 million and 45 % respectively. The reduction in financial assets by Euro 116 million is chiefly attributable to the disposal of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt. Property, plant and equipment increased year-on-year by Euro 44 million to Euro 587 million. This was mainly due to investments in transmission and supply grids for all utilities.

Current assets decreased to Euro 1,400 million, down by Euro 186 million compared with 30 September 2022. This reduction mainly resulted from the decrease in liquid funds on account of outflows of security deposits for counterparty default risk (margins). This factor was countered by increases in receivables from associates and other assets.

Equity grew by Euro 121 million in the year under report and stood at Euro 1,418 million at the balance sheet date. At 39 %, the equity ratio at 30 September 2023 was higher than the previous year’s figure of 34 %.

Provisions rose by Euro 50 million in total to Euro 155 million, with this increase being due above all to higher tax provisions. These mainly result from higher tax expenses in the year under report on account of the one-off other operating income generated from the disposal of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt, as well of higher earnings at companies included in the fiscal unity.

Liabilities decreased by Euro 433 million to Euro 1,990 million. This reduction was principally due to the lower volume of liabilities to associates, particularly for security deposits for counterparty default risk (margins) due to MVV Trading GmbH.

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.

2023 activity statements

With its 2023 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, metering operations, other activities within the electricity and gas sectors and 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 44 million for the year under report (previous year: Euro 45 million). The gross performance for the 2023 financial year was thus at the previous year's level. In terms of total electricity sector sales of Euro 1,072 million (previous year: Euro 1,035 million), sales in the electricity distribution activity are of subordinate significance.

Alongside income from leasing 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 2023 was opposed by corresponding other operating expenses. The electricity distribution activity field generated an annual net deficit of Euro 2 million in the 2023 financial year (previous year: annual net income of Euro 9 million).

At 30 September 2023, total assets in the electricity distribution activity field came to Euro 168 million (previous year: Euro 160 million), corresponding to a 39 % share of total assets in the electricity sector at MVV Energie AG (previous year: 26 %). Property, plant and equipment relating to electricity distribution increased compared with the previous year's balance sheet date. At Euro 158 million (previous year: Euro 149 million), this item accounted for a 94 % share of total electricity distribution assets (previous year: 93 %). On the equity and liabilities side of the balance sheet, electricity distribution liabilities decreased from Euro 87 million to Euro 83 million. These mainly involve liabilities to banks.

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 0.9 million were reported for metering operations using modern measuring equipment and intelligent measuring systems in the year under report (previous year: Euro 0.8 million). Gross performance for the 2023 financial year therefore amounted to Euro 0.9 million. Measured in terms of total electricity sector sales of Euro 1,072 million (previous year: Euro 1,035 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 leasing its electricity meters (mME/iMSys).

Earnings were countered by depreciation of Euro 0.7 million on the electricity meters (mME/iMSys) recognised under non-current assets at MVV Energie AG (previous year: Euro 0.5 million). In the 2023 financial year, mME/iMSys metering operations posted an annual net deficit of Euro 118 thousand (previous year: annual net deficit of Euro 414 thousand).

At 30 September 2023, total assets in the mME/iMSys metering operations activity field stood at Euro 3.9 million (previous year: Euro 3.3 million), corresponding to a 0.9 % share of total assets in the electricity sector at MVV Energie AG (previous year: 0.5 %). At the balance sheet date, property, plant and equipment relating to mME/iMSys metering operations amounted to Euro 3.9 million (previous year: Euro 3.3 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 2.3 million were reported for mME/iMSys metering operations (previous year: Euro 2.2 million). These mainly involve liabilities to other activity fields.

Gas distribution

In the year under report, the gas distribution activity field reported sales of Euro 26 million (previous year: Euro 28 million). Gross performance was thus at the previous year’s level. Compared with total gas sector sales of Euro 142 million (previous year: Euro 112 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 2023 was opposed by corresponding other operating expenses. The gas distribution activity field generated annual net income of Euro 4 million in the year under report (previous year: Euro 5 million).

Total assets in the gas distribution activity field amounted to Euro 141 million at the balance sheet date on 30 September 2023 (previous year: Euro 136 million) and accounted for some 62 % of total assets in the gas sector at MVV Energie AG (previous year: 74 %). At Euro 135 million, property, plant and equipment in gas distribution was Euro 5 million higher than in the previous year and made up 96 % of total assets in this activity field (previous year: 95 %). On the equity and liabilities side of the balance sheet, gas distribution liabilities decreased from Euro 77 million to Euro 72 million. These primarily involve liabilities to banks.

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

Publicly listed companies are obliged under § 289f of the German Commercial Code (HGB) to submit a Corporate Governance Statement. 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 Statement with the Declaration of Compliance was published on our website at **mvv.de/en/corporate-governance** on 9 November 2023.

Declaration pursuant to § 312 AktG

The Executive Board has compiled a report on relationships with associates for the 2023 financial year (dependent company report) pursuant to § 312 AktG in which it states: "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 2023 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.

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 2023, 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, its material shareholder 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, 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 directly held 45.08 % of the share capital and voting rights. The sole shareholder in FS DE Energy GmbH is FS Energy Holdco S.à r.l. The shareholders of FS Energy Holdco S.à r.l. are FS Energy TopCo S.à r.l., which holds a shareholding of 84.9%, and Square Beteiligungs GmbH & Co. KG, which holds a 15.1 % stake. FS Energy TopCo S.à r.l. is an indirect subsidiary of a fund managed by First Sentier Investments International IM Limited. The shareholders (limited shareholders) in Square Beteiligungs GmbH & Co. KG are various individual companies of Versicherungskammer Bayern, Versicherungsanstalt des öffentlichen Rechts (VKB). This indirect shareholding is also managed by First Sentier Investments International IM Limited; Square and VKB do not have any rights of control or management over the indirect shareholding in MVV.

These disclosures are based on voting right notifications provided to us by shareholders, entries in the Share Register and publicly available information.

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 company's 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

- Continuing great uncertainty in overall economy and energy industry
- Decreasing volatility on energy trading and procurement markets
- Adjusted EBIT excluding disposal gains expected to amount to between Euro 360 million and Euro 440 million
- Investments set to rise significantly

Outlook

Macroeconomic developments

In their “Autumn Joint Forecast” for the 2023 calendar year, Germany’s leading economic research institutes expect the country’s gross domestic product to contract by 0.6 %. The sharp rise in energy prices in 2022 had halted the recovery from the effects of the coronavirus pandemic, inflation was eroding household purchasing power and the rise in base rates was adversely affecting the construction industry. More recently, wages and salaries have risen due to inflation, energy prices have fallen and exporters have in some cases been able to charge on the higher costs they have incurred, leading to a recovery in purchasing power. The downturn is therefore expected to ease at the end of the year. For 2024, the economic researchers have reduced their economic growth forecast by 0.2 percentage points to 1.3 %.

Business framework

Alongside macroeconomic developments, MVV’s future business performance will be shaped above all by changes in energy and climate policy on national and European levels, as well as by regulatory interventions. We report on relevant changes in energy policy in the chapter Business Framework.

The degree of volatility on the energy trading and procurement markets, involving rapid movements in prices, decreased somewhat in the year under report compared with the previous year (chapter Business Framework). We expect volatility to decline further. From our perspective, however, it will still not return to its normal long-term level and will therefore remain a source of uncertainties for MVV in the 2024 financial year as well. This is also due to overall global tensions, the further development in which cannot be predicted with any degree of reliability. Looking ahead, we also expect competitive pressure to remain relentlessly high.

Overall summary

We again issue our forecast for the 2024 financial year against a backdrop of great uncertainty in the overall economy and the energy industry. Overall, we expect the energy industry, and thus MVV as well, to be exposed to far-reaching changes in the medium to long term. We have been preparing for these for years now. We are continually monitoring all developments relevant to our business. With our measures, we are endeavouring to ensure that our Opportunity/Risk Profile remains well balanced despite all these challenges.

Encouraged by national and international climate protection efforts and legal initiatives, in the year under report we further raised our long-term sustainability and decarbonisation targets (chapter Corporate Strategy). We now aim to become #climatepositive as a company by 2035. To achieve this target, we will step up the pace of our activities to make a reality of the heat transition, implement the electricity transition and expand our climate neutrality solutions for customers. To this end, we will significantly increase our investments, with a total of around Euro 7 billion planned for this transformation in the decade until 2033. At the same time, we are pursuing measures to enhance processes and reduce costs. This way, we are creating a basis for MVV to generate sustainable and profitable growth.

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 also depend 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.

For the 2024 financial year, we expect adjusted EBIT in the Customer Solutions reporting segment to fall significantly short of the previous year's figure, which was influenced by exceptional non-recurring items. For the New Energies reporting segment, we expect to a see a moderate rise in adjusted EBIT. In the Supply Reliability reporting segment, we expect adjusted EBIT to show a significant increase.

Based on these expectations for our reporting segments, from an operating perspective we expect adjusted EBIT on Group level and excluding disposal gains to amount to between Euro 360 million and Euro 440 million, i.e. to be within a range of +/– 10 % of Euro 400 million.

Earnings performance of MVV Energie AG in separate financial statements

For the 2024 financial year, we expect annual net income after taxes at MVV Energie AG to fall significantly short of the previous year's figure (Euro 191 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 view of this, the Executive Board has decided to increase the regular dividend by Euro 0.10 per share compared with the previous year and to propose a dividend of Euro 1.15 per share for approval by the Annual General Meeting on 8 March 2024. In addition, to mark the 150th anniversary of MVV and its predecessor companies it plans to distribute a one-off dividend. Given the company's exceptional earnings performance, it is proposed that this should amount to Euro 0.30 per share. The Supervisory Board will decide in December 2023 on its dividend proposal to the Annual General Meeting.

Investments

From a current perspective, we will significantly increase our investments in the 2024 financial year compared with the previous year (Euro 344 million) while retaining largely unamended investment focuses.

Capital resources and financing structure

We continue to have very good access to the capital markets and are therefore able to cover our financing and liquidity needs at all times. Our adjusted equity ratio of around 40 % enables us to continue making high volumes of investments. We finance 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. We adhere to key figures as guidelines for debt-financed growth and thus ensure an implicit rating for MVV that is stably on investment grade level.

New reporting structure from 2024 financial year

To account for the disposals of shareholdings made in recent financial years, which impacted in particular on the structure of our existing reporting segment Strategic Investments, as well as for the further development of the MVV Group, MVV also plans to amend its reporting structure from the start of the 2024 financial year. The company is to be managed in four reporting segments to which various business fields are allocated:

- Customer Solutions
- New Energies
- Generation and Infrastructure
- Other Activities

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 to the best of its knowledge 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, one reflected not least in the fact that many participants on national and international levels are stepping up their efforts to protect the climate and make their businesses sustainable. MVV is actively shaping this transformation: With our “Mannheim Model”, we will be one of the first energy companies in Germany to become #climatepositive. This process will be driven by the components of the model, namely heat transition, electricity transition and customer solutions. 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. This is true both for the year under report and for the near future.

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, particularly 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, processes 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 is continually developed further. 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 bear decentralised responsibility for the functionality of the IKS. 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. Control activities are documented in risk and control matrices together with the requirements for performing such activities.
- We safeguard the required specialist and personal skills of our employees with the assistance of job descriptions; these set out 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 resulting above all from amended or incorrectly functioning internal processes, amended or malfunctioning IT systems, erroneous conduct on the part of persons (whether unintended or intended) and internal and external events (such as company acquisitions or new accounting standards).

At MVV, the systematic assessment of risks relating to the company’s financial reporting is performed on several levels. Our IKS management each year reviews all group companies based on suitable criteria to assess their materiality and thus determine 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, managers 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 into 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, which are stipulated with due consideration 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 as intended.

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 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 anchored 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 relevant 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 advice and 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 the Executive and Supervisory Boards of MVV Energie AG on an annual basis. The status reports submitted by the IKS manager are based, among other aspects, on information from the decentralised IKS officers, data from the IT solution used to check performance 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 IKS management, our managers perform a self-assessment on 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 process 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 in their area of responsibility is effective 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)

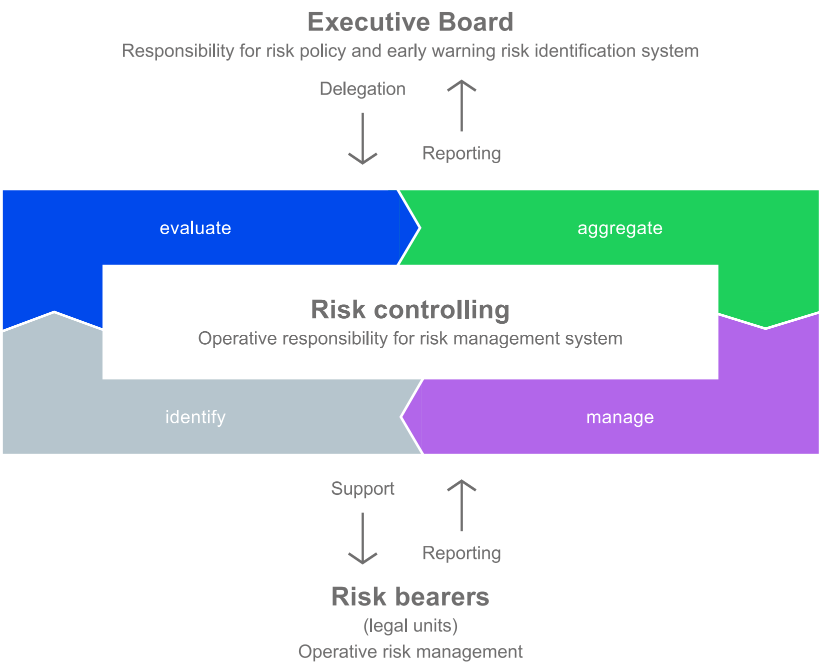
Our risk management system (RMS) is intended to enable us to detect opportunities and risks at an early stage of developments. Opportunities may lead to a positive financial variance in company earnings compared with the value budgeted, while risks may result in a correspondingly negative financial divergence. 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 into 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 financial risk management. The opportunities and risks expected at the MVV Group directly reflect the potential and the challenges resulting from the transformation in our business processes towards even greater sustainability and climate-positive business activities.

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

Risk management system



Basic principles and organisation of RMS

The Executive Board determines the company’s risk policy and lays down all processes and responsibilities. Within the legal business units and business fields, responsibility for operative risk management is incumbent on “risk bearers”. These are the employees who, on account of their specific expertise, form part of 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.

Our central risk controlling function monitors the risk situation at the Group. It continually monitors those opportunities and risks that are relevant to our company and aggregates these into an opportunity/risk profile. This profile represents a net analysis, meaning that all measures taken to avoid a risk are already factored into the measurement of the risk. We aggregate existing opportunities and risks 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 the 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 adjusted EBIT forecast.

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

Supervision

The RMS is implemented, maintained and supervised by the executive boards and managing directors of consolidated subsidiaries. Our group internal audit department audits the system regularly as part of its risk-based audit plan. It identifies any weak points and reviews whether the improvements introduced are having their intended effect. The Executive Board is informed about the risk management status regularly and whenever specific events require report.

The Supervisory Board and Audit Committee of MVV Energie AG also monitor the appropriateness of the structure and functionality of the RMS.

Presentation of opportunity/risk situation

In what follows, we present MVV’s current opportunity/risk situation. We allocate opportunities and risks in each case to one of our total of six categories, 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. We categorise the 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. We report on our adjusted EBIT forecast in the chapter Outlook.

Expected risk situation
Since the 2022 financial year, the Group’s risk situation has, in addition to the opportunities and risks typical to its business, continued to be significantly influenced by the effects of the war in Ukraine. At the same time, our business is increasingly being affected by risks resulting from the development in interest rates, purchasing power and inflation, as well as by credit risks and the availability of specialist staff. For companies operating in Germany and in our sector, we also see crisis-related market price and financing risks, legal risks and individual operating risks (such as cyber risk or the availability of critical raw materials and supplies due to developments in supply chains).

MVV is responding to these great uncertainties with numerous operating measures and initiatives. This way, MVV intends to develop solutions that are coordinated with the objectives of our Corporate Strategy in order to limit potential negative implications both for our own business performance and for our customers to the best possible extent while at the same time supporting our #climatepositive strategy.

We provide detailed comments on the principal opportunities and risks in the six categories presented in the chart below.

Expected risk situation in FY 2024

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	Medium
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.

Lower level of energy prices on wholesale markets
The clean dark spread (CDS) and the clean spark spread (CSS), i.e. the result achieved from marketing electricity from the generation plants in our environmental energy business and our renewable generation sources, 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.

During the war in Ukraine to date, we have observed at times stark rises in wholesale market prices 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 marketing opportunities arose most recently due to restrictions in the technical availability of our generation capacity at a company recognised at equity. No interventions by lawmakers in plant management and operating strategy are currently apparent for the near future in connection with the gas supply situation, neither are any such interventions visible in terms of short-term amendments to incentives to uphold fossil-based generation capacities (we refer here to the reactivation of coal-based generation plants due to potential gas shortages versus the decommissioning of such plants to achieve climate protection targets). Any such interventions would nevertheless significantly change our opportunity/risk profile.

At the same time, marketing uncertainties in the combined heat and power and environmental energy business fields are countered by opportunities resulting from the higher current level of market prices for energy. The growth recently achieved in the marketing of renewable generation sources makes it possible for MVV to seize market opportunities together with its customers and business partners and thus press ahead with its goal of becoming #climatepositive.

Procurement price levels and volatilities continue to present challenges
The energy volumes required by our sales department for customer supplies at various locations are predominantly procured on the energy trading market. To mitigate the ongoing high energy procurement prices resulting from 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 subsequent financial years. This way, we can reduce the impact of the sharply fluctuating market prices seen in recent periods on our procurement costs and customer sales prices.

Moreover, given the renewed intensification in price competition there is nevertheless increased uncertainty at present as to whether we will be able to fully include the recent sharp rise in procurement costs in our price calculations in all cases in future.

In combination with sales prices, the scope of fluctuations observed in procurement prices and the speed at which these changes have taken place, such as the particularly marked changes most recently seen in late summer 2022, may result in significant opportunities and risks. Such situations may create economic difficulties for individual market players in future as well 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 from the potential procurement of replacement resources required due to defaults among trading partners.

We are countering the sharp change in market conditions by adjusting our supply contracts with business customers to reflect both price fluctuations and the associated impact on margins and liquidity in the contractual terms and thus manage these aspects.

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. We accompany the energy trading performed by our group company MVV Trading with suitable risk management measures.

Due to potential supply bottlenecks and delays, as well as to general inflation, price risks may arise for commodities, materials or supplier products that require procurement. Particularly worth mentioning in this respect are raw materials and supplies for power plant operations, as well as components such as photovoltaics systems, batteries, 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.

Fluctuating waste and biomass procurement prices
We observe and assess potential opportunities and risks 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 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 negatively on our waste incineration business.

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

Dynamic recent changes in interest rates
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 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
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 natural 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 produces opportunities or risks for our business performance.

Macroeconomic developments impact on turnover
MVV is directly affected by macroeconomic developments, and here in particular due to developments in the energy market. 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 such 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 ongoing 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.

Competitive pressure on turnover and opportunities resulting from sustainability 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 turnover. If customers switch to generating the energy they consume themselves, we accompany them as partners, support them with innovative, competitive products and develop services offering substantial customers 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 attach 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.

Availability and quality of waste and biomass are highly significant 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 ongoing war in Ukraine and potential associated reductions in industrial and commercial production and waste volumes may have a noticeably negative impact on waste prices and procurement volumes. This applies in equal measure to both of our geographical focuses in Germany and 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 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 wind turbine and photovoltaics system project development business are attributable to the regulatory climate and to the resultant scope and structure of future project tenders and the development in market interest rates. During implementation, the progress made with 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 by every 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 by upstream suppliers that we cannot fully factor into our sales prices in the short term. At the same time, we are also focusing on securing the availability of adequate installation and tradespeople capacities to enable us to meet our goal of becoming #climapositive.

Particularly in connection with potential supply bottlenecks at upstream suppliers and delays to process stages, 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 unchanged
By their nature, large-scale generation plants and grid infrastructure installation measures have long planning and construction stages and harbour corresponding risks. 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 or heat or additional costs due to new developments or potential price increases arising at short notice at upstream suppliers. We therefore attach 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.

Here, we are paying particular attention to the impact of the ongoing war in Ukraine on supply chains and upstream suppliers, on the prices of materials and commodities for construction projects and on the availability of sufficient installation and tradespeople capacities. Any delays to supplies of materials, unbudgeted increases in the cost of materials or shortage of installation capacities may, in terms of the completion of modules or sections, 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 of project risks, especially those involving higher costs and deadline overruns, to the contractual partners responsible for such.

Uncertainties resulting from plant operations unchanged
The operation of energy generation plants and grid facilities to supply our customers with energy and utilities involves substantial operating uncertainties for our Group. Unscheduled downtime at plants may lead to a loss of production or interruption to supplies. Additional financial outlays may also be required in this context, 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 any gas shortage, a situation which is still possible. This includes increasing the availability of individual plants or reactivating these if needed. It 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 wholly exclude the possibility of downtime. 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. In many cases, however, these only partly cover the effects of unscheduled downtime. Any shortfall in production volumes compared with planned marketing volumes may also result in financial risks. 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 #climatepositve target as providing an opportunity for us 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 forthcoming 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 individual 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 maintaining our ability to fill positions with the required specialists and experts at a high level.

We assume that we would be able to successfully manage the specific challenges presented by coronavirus, also if the pandemic were to intensify once again in future. To protect our employees while simultaneously safeguarding our operating processes, we adopted rules governing conduct, contact and absence and adapted our forms of cooperation and communication to work requirements, not least by drawing on digital solutions. These necessary solutions and requirements were widely accepted and implemented by our staff. This way, we safeguarded the availability of personnel required for our processes – at MVV, at our shareholdings and in our cooperation with other companies. This is a significant factor, not least given the sharp rise in our recruiting requirements, particularly in our growth businesses.

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 32 Provisions)).

IT security as highly significant factor
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 our IT 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 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 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 uncertainties existing in connection with regulation or with other changes in the legal basis for our business operations.

Regulatory uncertainties continue to apply, while innovative products and sustainable energy generation offer potential
Companies operating in the energy industry basically face the risk and opportunity that federal and state lawmakers and authorities, such as the Federal Network Agency (BNetzA) or cartel authorities, 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 and new requirements to achieve national climate protection targets. Moreover, we are closely monitoring developments in terms of a future windfall tax that may potentially be imposed by lawmakers on certain profits.

One further consequence of the ongoing war in Ukraine involves the increased efforts currently being made to convert electricity and heat generation and their respective distribution as swiftly as possible to a sustainable approach.

With regard to the legislation already in place for the coal exit, the ongoing 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 continue to result 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.

We see the legal framework for transitioning to sustainable energy generation as presenting challenges, but also as a particular source of strategic potential. Based on our #climatepositive target, we are actively and consistently seizing this potential with innovative products, such as the extensive measures and efforts we are making to develop green heat supply structures and new components of a circular economy 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.

Management of legal risks
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 aimed at limiting these risks.

Our Compliance Management System (CMS) helps us to minimise any infringements of the law. Where applicable, any compliance 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 in the Supply Chain (LkSG). This relates both to our own activities and 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 matters or other topics. These could, for example, limit (or potentially extend) our ability to structure contracts. In connection with the ongoing 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.

Active receivables management
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, for example, or in our long-term supply relationships with business customers. Moreover, the significant rises in energy product prices arising at short notice in the past have increased the risk that individual wholesale partners may encounter financial difficulties, potentially threatening the fulfilment of their contractual obligations to us. To limit this kind of receivables default risk, 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 ongoing 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 and by focusing on the customer-based implementation of the energy price cap. At the same time, we have also established assistance programmes for particularly vulnerable retail customers.

Active management of refinancing and liquidity
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 ongoing war in Ukraine, we continue to monitor our liquidity management very closely. To this end, MVV has established automated assessments which perform detailed analyses of potential future developments and influences on the liquidity management in our wholesale business by reference to different scenarios. This approach is to be viewed in particular against the backdrop of ongoing uncertainty on energy trading markets and the possibility of sharp fluctuations in market prices.

The analysis focuses above all on the resultant cash-effective security deposits required for wholesale trading, i.e. margins, which fluctuate sharply. 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 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. To ensure that we always have sufficient liquid funds even in the event of larger-scale fluctuations, we have on the one hand expanded our margin and liquidity management and forecasts and on the other hand maintain cash lines. If need be, we can identify any need for action at an early stage, take suitable countermeasures and conclude off-market transactions. These steps would nevertheless be performed with due consideration of our potential receivable default risks.

Monitoring country risks
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 analyses of the 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 closely monitoring current developments in the UK economy, 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 by 2035. 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 necessary to new conditions.

Key components of our 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. Although 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 from fossil fuels to a CO_2-neutral heat supply, as offering opportunities in the Group's business fields. Examples with which we are reducing the fossil-based share of our generation include gaining heat from sustainable energy sources, such as river heat pumps or deep geothermal energy, as well as heat pumps at our customers. This approach also involves 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) has built on behalf of MVV. Since October 2023, this has used river water from the Rhine as a climate-neutral source of warmth to generate district heat. With thermal energy capacity of around 20 MW and electricity capacity of 7 MW, it is 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. The framework for withdrawing from our conventional generation capacities is largely determined by the coal exit legislation and, since the beginning of the war against Ukraine, by any associated potential gas shortage. 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 been significantly extended by current developments in energy prices as a result of the ongoing 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 have pooled our project development capacities at the Group. We currently still see challenges surrounding the addition of onshore wind turbines, where difficult hurdles exist 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 in view of our consistent focus on becoming #climatepositive. Given our expertise and our partnership-based approach to working towards sustainability targets, we see expansion potential in the German market, for example in the anaerobic digestion of bio-waste and in recovering resources upon the incineration of sewage sludge. With the launch of operations at our first climate-positive plant in Dresden, we have reached an important internal milestone for MVV in this respect. Not only that, we have demonstrated that we can successfully address the social and economic challenges facing our industry.

Further growth potential is available to us abroad and in photovoltaics. However, these areas are subject to dependencies on local subsidy regimes and clients. Moreover, there is tough competition, particularly in high-growth Asian markets, which we intend to counter with a highly focused approach.

Given the ongoing crisis in energy prices and the existing 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 and sustainable 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, partnerships with our customers and the close dovetailing of these partnerships with the objectives of the heat transition also form 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 press ahead with their own energy transitions. Examples here include the portfolio of solutions offered by MVV Enamic, products for decentralised solutions in our retail and commercial sales activities, such as heat pumps, 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 on the energy and procurement markets, and in particular the implications of the ongoing war in Ukraine, mean that the degree of uncertainty involved in entrepreneurial activity in the energy sector as whole, and thus also for MVV, has increased significantly. Compared with previous years, MVV continues to face a high level of uncertainty. Overall, however, the range of implications which opportunities and risks may have for our adjusted EBIT and our liquidity decreased slightly again in the year under report.

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 remains just as great as ever, 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, on processes being speeded up and simplified and on state subsidy initiatives. 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 remains uncertain is how the opportunities and risks and the crisis-related challenges triggered by the ongoing war in Ukraine will develop in the medium and long terms and how long these will continue to apply. Key foreground issues are our supply chains, the availability of commodities and materials, the development in their prices, demand for qualified specialists in general, the ability to secure installation and tradespeople capacities in particular and, to a growing extent, 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 terms 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. The same approach also basically applies to the renewed flaring up of the Middle East conflict since 7 October 2023.

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 appropriately structured and effective.*

Consolidated Financial Statements

Contents

Income Statement

Income statement

Euro 000s	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022	Notes
Sales	6,783,781	6,093,298	
Less electricity and natural gas taxes	164,733	169,710	
Sales less electricity and natural gas taxes	**6,619,048**	**5,923,588**	1
Changes in inventories	17,238	40,249	2
Own work capitalised	26,682	26,161	3
Income from derivative financial instruments [1]	4,574,871	4,634,560	4
Other operating income [1, 2]	257,645	126,271	5
Cost of materials	5,495,172	5,283,911	6
Employee benefit expenses	541,285	510,767	7
Expenses for derivative financial instruments [1]	3,891,854	4,506,589	8
Other operating expenses [1]	306,779	207,052	9
Impairment losses on financial instruments	14,303	20,409	
Income from companies recognised at equity [2]	21,683	22,159	10
Other income from shareholdings [2]	2,174	1,456	10
EBITDA	**1,269,948**	**245,716**	
Depreciation and amortisation	206,878	211,262	11
EBIT	**1,063,070**	**34,454**	
of which result of IFRS 9 derivative measurement	185,867	– 315,329	
of which EBIT before result of IFRS 9 derivative measurement	877,203	349,783	
Financing income	36,106	36,452	12
Financing expenses	77,410	71,676	13
EBT	**1,021,766**	**– 770**	
Taxes on income	268,560	– 11,397	14
Annual net income	**753,206**	**10,627**	
of which non-controlling interests	– 291,904	302,732	
of which earnings attributable to MVV Energie AG shareholders (annual net income after minority interests)	**1,045,110**	**– 292,105**	15
Basic earnings per share (Euro)	**15.86**	**– 4.43**	
Diluted earnings per share (Euro)	**15.86**	**– 4.43**	

1 Previous year's figures adjusted. For reasons of transparency and to account for ongoing market volatility, income from / expenses for derivative financial instruments have been stated separately.

2 Previous year's figure adjusted. Reclassification of disposal gains

Statement of Comprehensive Income

Statement of income and expenses recognised in group equity

Euro 000s	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022
Annual net income	**753,206**	**10,627**
Cash flow hedges	– 673,834	745,999
Hedging costs	219	– 102
Currency translation differences	10,908	– 2,476
Reclassifiable share of companies recognised at equity	– 1,249	– 898
Items that may subsequently be reclassified to profit or loss	**– 663,956**	**742,523**
Actuarial gains and losses	2,239	26,912
Non-reclassifiable share of companies recognised at equity	39,692	3,634
Items that will not be reclassified to profit or loss	**41,931**	**30,546**
Other comprehensive income	**– 622,025**	**773,069**
Total comprehensive income	**131,181**	**783,696**
Non-controlling interests	– 391,711	378,413
Total comprehensive income attributable to MVV Energie AG shareholders	**522,892**	**405,283**

Balance Sheet

Balance sheet

Euro 000s	**30 Sep 2023**	30 Sep 2022	Notes
Assets			
Non-current assets			
Intangible assets	312,670	316,205	16
Property, plant and equipment	2,924,047	2,955,387	17
Right-of-use assets	140,393	145,411	18
Investment properties	2,678	2,911	19
Interests in companies recognised at equity	154,005	194,418	20, 21
Other financial assets [1]	13,541	9,028	23
Asset-side derivative financial instruments [2]	530,232	3,764,544	24
Other financial receivables and assets [1, 2]	60,510	55,274	25
Other non-financial receivables and assets [2]	16,687	10,989	26
Deferred tax assets	47,275	115,219	39
	4,202,038	**7,569,386**	
Current assets			
Inventories	322,143	352,155	
Asset-side derivative financial instruments [2]	3,006,122	13,662,345	27
Trade receivables	515,010	554,103	28
Other financial receivables and assets [2]	321,028	62,569	25
Other non-financial receivables and assets [2]	185,865	183,440	26
Income tax receivables	26,249	58,236	29
Cash and cash equivalents	975,026	1,884,998	30
Assets held for sale	–	1,047	
	5,351,443	**16,758,893**	
	9,553,481	**24,328,279**	

1 Previous year's figure adjusted. Non-current lease receivables and loans have been reclassified to other financial receivables and assets.

2 Previous year's figure adjusted. For reasons of transparency and to account for ongoing market volatility, derivative financial instruments have been stated separately, as have financial and non-financial receivables and assets.

Balance sheet

Euro 000s	**30 Sep 2023**	30 Sep 2022	Notes
Equity and debt			
Equity			31
Share capital	168,721	168,721	
Capital reserve	455,241	455,241	
Accumulated net income	1,552,624	569,653	
Accumulated other comprehensive income	– 21,294	524,178	
Capital of MVV	**2,155,292**	**1,717,793**	
Non-controlling interests	300,713	728,278	
	2,456,005	**2,446,071**	
Non-current debt			
Provisions	136,280	147,704	32, 33
Financial debt	1,527,406	1,733,109	34
Liability-side derivative financial instruments [1]	487,807	3,428,029	35
Other financial liabilities [1]	28,245	19,379	36
Other non-financial liabilities [1]	178,597	143,081	37
Deferred tax liabilities	198,770	527,143	39
	2,557,105	**5,998,445**	
Current debt			
Other provisions	217,761	202,915	32, 33
Tax provisions	4,807	1,054	32
Financial debt	270,563	183,826	34
Liability-side derivative financial instruments [1]	2,950,467	13,177,746	35
Trade payables	471,570	507,216	38
Other financial liabilities [1]	254,510	1,540,118	36
Other non-financial liabilities [1]	243,855	231,504	37
Income tax liabilities	126,838	39,384	39
	4,540,371	**15,883,763**	
	9,553,481	**24,328,279**	

1 Previous year's figure adjusted. For reasons of transparency and to account for ongoing market volatility, derivative financial instruments have been stated separately, as have financial and non-financial liabilities.

Statement of Changes in Equity

Statement of changes in equity

Euro 000s	Equity contributed: Share capital of MVV Energie AG	Equity contributed: Capital reserve of MVV Energie AG	Equity generated: Accumulated net income	Equity generated: Accumulated other comprehensive income: Currency translation difference	Equity generated: Accumulated other comprehensive income: Fair value measurement of, financial instruments	Equity generated: Accumulated other comprehensive income: Actuarial gains and losses	**Capital of MVV**	Non-controlling interests	**Total capital**
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
Annual net income	–	–	– 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**
Balance at 1 October 2022	**168,721**	**455,241**	**569,653**	**17,031**	**561,408**	**– 54,261**	**1,717,793**	**728,278**	**2,446,071**
Other comprehensive income	–	–	–	9,502	– 573,217	41,497	– 522,218	– 99,807	– 622,025
Annual net income	–	–	1,045,110	–	–	–	1,045,110	– 291,904	753,206
Total comprehensive income	**–**	**–**	**1,045,110**	**9,502**	**– 573,217**	**41,497**	**522,892**	**– 391,711**	**131,181**
Dividends paid	–	–	– 69,202	–	–	–	– 69,202	– 27,147	– 96,349
Capital increase/reduction at subsidiaries	–	–	–	–	–	–	–	–	–
Change in scope of consolidation/ level of shareholding	–	–	7,063	– 18,133	– 5,196	75	– 16,191	– 8,707	– 24,898
Balance at 30 September 2023	**168,721**	**455,241**	**1,552,624**	**8,400**	**– 17,005**	**– 12,689**	**2,155,292**	**300,713**	**2,456,005**

Cash Flow Statement

Cash flow statement [1]

Euro 000s	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022
Annual net income before taxes on income	1,021,766	– 770
Amortisation, depreciation and write-ups of intangible assets, property, plant and equipment and investment properties	206,878	208,570
Financial result	41,304	35,225
Interest received	28,676	6,976
Change in non-current provisions	– 483	– 12,128
Other non-cash income and expenses	– 215,920	346,025
Result of disposal of non-current assets	– 130,059	– 53,454
Cash flow before working capital and taxes	**952,162**	**530,444**
Change in other assets	– 224,876	– 354,070
Change in other liabilities	– 1,249,417	840,832
Change in current provisions	17,143	25,412
Income taxes paid	– 108,764	– 90,592
Cash flow from operating activities	**– 613,752**	**952,026**
Payments for investments in intangible assets, property, plant and equipment and investment properties	– 320,675	– 292,056
Proceeds from disposals of intangible assets, property, plant and equipment and investment properties	4,686	4,034
Proceeds from subsidy payments	5,018	18,659
Proceeds from sale of fully consolidated companies [2]	179,729	25,617
Proceeds from sale of other financial assets, including companies recognised at equity, non-current lease receivables and loans	151,334	76,508
Payments for acquisition of fully consolidated companies and other business units [2]	– 5,392	– 33,969
Payments for other financial assets, including companies recognised at equity, non-current lease receivables and loans	– 26,476	– 5,262
Cash flow from investing activities	**– 11,776**	**– 206,469**
Payments from taking up of loans	26,665	321,792
Payments for redemption of loans [3, 4]	– 140,498	– 272,258
Payments for redemption of lease liabilities [3, 4]	– 16,294	– 15,806
Dividends paid	– 69,202	– 69,202
Dividends paid to non-controlling interests	– 27,148	– 22,919
Change due to changes in capital at minorities	–	– 742
Interest paid	– 58,932	– 58,815
Cash flow from financing activities	**– 285,409**	**– 117,950**
Cash-effective changes in cash and cash equivalents	– 910,937	627,607
Change in cash and cash equivalents due to currency translation	965	– 786
Cash and cash equivalents at 1 October 2022 (2021)	1,884,998	1,258,177
Cash and cash equivalents at 30 September 2023 (2022)	**975,026**	**1,884,998**
of which cash and cash equivalents at 30 September 2023 (2022) with restraints on disposal	2,607	150

1 See further disclosures on cash flow statement in Note 43

2 See disclosures in “Scope of consolidation and changes in scope of consolidation”

3 Previous year’s figure adjusted. Payments for redemption of lease liabilities now stated in separate line item.

4 See “Liabilities in connection with financing activities” table in Note 43

Cash Flow Statement

Cash flow – aggregate presentation

Euro 000s	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022
Cash and cash equivalents at 1 October 2022 (2021)	**1,884,998**	**1,258,177**
Cash flow from operating activities	– 613,752	952,026
Cash flow from investing activities	– 11,776	– 206,469
Cash flow from financing activities	– 285,409	– 117,950
Change in cash and cash equivalents due to currency translation	965	– 786
Cash and cash equivalents at 30 September 2023 (2022)	**975,026**	**1,884,998**

Notes to MVV's 2023 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 2023.

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 2023 financial year (1 October 2022 to 30 September 2023). 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. These are 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 2023 and subsequently forwarded these to the Supervisory Board for approval.

Impact of the war in Ukraine

The 2023 financial year was once again significantly influenced by the war in Ukraine. This created ongoing uncertainties on the energy market, leading to highly volatile prices in the gas and electricity businesses during the year. This continued to produce high rates of inflation and a slowdown in economic activity, particularly in Germany.

For MVV, these circumstances mean that the fair values recognised in the balance sheet, which had risen sharply in the previous year, fell significantly in the 2023 financial year. Total assets also showed a substantial reduction. Due to the high level of intra-year volatility, the energy trading contracts recognised as derivative financial instruments continue to result in high volumes of measurement items in the income statement. These particularly impact on sales and cost of materials, as well as on income from and expenses for derivative financial instruments.

Current developments are continually monitored and assessed in terms of their implications for the MVV Group. Where necessary, measures are initiated. The identification of risks to the company is one of the core tasks incumbent on the company's management. Measures taken to this end in the 2023 financial year included forming cross-departmental task forces to ensure a permanent exchange of information about potential risks and changing underlying conditions.

Overall, MVV's assessment of the impact of the Ukraine war on the Group has not changed compared with the previous year. Procurement prices, particularly for the main products of electricity and gas, continue to be contractually agreed. Energy trading contracts are deployed to hedge the risk of any increase in the company's procurement costs. MVV is not exposed to any material risks from open positions or open volumes to be covered on the market. In view of this, no provisions for onerous contracts 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 both in the financial year and in future is significantly influenced by the development in wholesale prices, particularly for electricity and gas.

Impact of climate-related risks

The energy industry has been undergoing a fundamental transformation for several years already. This is notably influenced by international climate protection targets and geopolitical crises. MVV is actively helping to shape this transformation. Our pathway to the future is the "Mannheim Model". This comprises three strategic focuses, which involve both opportunities and risks. Alongside the heat transition, with its move towards increasingly renewable heat generation, and the electricity transition, with the accelerated expansion of renewables energies, innovative marketing concepts and pooled project development capacities, we also provide solutions to support our customers in implementing their own energy transitions.

Given their growing importance, climate-related risks are continually monitored and assessed by the central risk controlling function in conjunction with the Group's overall risk situation. Risk profiles, whose assessment also accounts for any measures initiated, are compiled to this end.

Opportunities and risks relating to climate change have been accounted for when preparing the consolidated financial statements as of 30 September 2023, as have the objectives of our strategy, sustainability and climate protection. The financial statements take due account of all foreseeable factors that impact on our assets, liabilities, income and expenses.

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 2023 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 2023 financial year and of which no voluntary premature application has been made. To the extent that they already been endorsed by the EU, 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 2023.

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 subsidiaries, which are reported under equity, are not attributable to the Group. In the consolidated balance sheet, they are recognised 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. The materiality review is based on financial criteria, such as sales, EBIT and total assets. The threshold values are based on current group figures and amount to 0.75 % of the aforementioned key figures.

Interests in associates and joint ventures are consolidated using the equity method.

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 2022	131	32
Additions	7	1
Disposals	26	3
30 September 2023	**112**	**30**

MVV sold its Czech subgroup together with the parent company MVV Energie CZ a.s. and is thus continuing to align its portfolio towards its #climatepositive strategy.

The disposal of the Czech subgroup with its fully consolidated subsidiaries was completed on 9 December 2022. MVV Energie AG received contractually agreed funds totalling Euro 187,791 thousand from this sale. When offset with the liquid funds thereby disposed of at the Czech companies, the net inflow of funds amounted to Euro 178,637 thousand.

The carrying amounts of the assets and liabilities as of the disposal date (9 December 2022) were as follows:

Net assets

	Czech subgroup
Euro 000s	Value upon disposal
Intangible assets	7,185
Property, plant and equipment	132,091
Right-of-use assets	629
Other financial assets	207
Asset-side derivative financial instruments	9,196
Other receivables and assets	2,907
Deferred tax assets	274
Inventories	5,320
Trade receivables	12,697
Cash and cash equivalents	9,154
Provisions	2,901
Financial debt	6,924
Liability-side derivative financial instruments	649
Other liabilities	12,651
Deferred tax liabilities	13,517
Trade payables	7,543
Less other comprehensive income [1]	16,512
Less minority interests	8,815
Net assets	**110,148**

1 of which Euro 18,134 thousand recycled through profit or loss for currency translation and Euro 5,197 thousand for fair value measurement of financial instruments

In the 4th quarter of 2023, MVV also disposed of its shares in Frassur GmbH and AVA Abwasser- und Verwertungsanlagen GmbH, both in Mörfelden-Walldorf, and in MDW Muldendienst West GmbH, Frankfurt am Main. Further retirements among fully consolidated companies relate to five mergers and to the sale of three project companies at the Juwi subgroup. The aggregate carrying amounts of the assets and liabilities thereby disposed of at the aforementioned companies are presented in the following table. Overall, MVV received liquid funds of Euro 18,269 thousand from the sales of the six companies referred to above.

Net assets

Euro 000s	Other companies sold Value upon disposal
Intangible assets	3,619
Property, plant and equipment	990
Right-of-use assets	4,493
Trade receivables	2,048
Other receivables and assets	575
Deferred tax assets	90
Inventories	10,597
Cash and cash equivalents	2,301
Provisions	136
Financial debt	6,353
Other liabilities	711
Deferred tax liabilities	84
Trade payables	17,860
Less other comprehensive income	– 258
Less minority interests	– 88
Net assets	**– 85**

In the 1st quarter of the year under report, Juwi Energie Rinnovabili Srl, Verona, Italy, a company fully consolidated within the MVV Group, acquired 70 % of the shares in GEMdev Srl, Milan, Italy. This company, which is a project company with the objectives of developing and marketing photovoltaics systems in Italy, has been fully consolidated since its acquisition. Additions to fully consolidated companies also include five companies which were previously included as other majority shareholdings and have now been fully consolidated. In the 3rd quarter of the year under report, the company Juwi UW GmbH, Wörrstadt, was founded with the objective of pooling all substations to be built by Juwi GmbH in future.

In the 3rd quarter of the year under report, MVV Energie AG sold its 48.40 % shareholding in Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt, to Ingolstädter Kommunalbetriebe AöR, Ingolstadt. Furthermore, the 55 % stake held in the at-equity shareholding SWT Solar GmbH, Trier, was also sold in the 3rd quarter. A further retirement among at-equity companies relates to the liquidation of Renabi GmbH, Mannheim, in the 4th quarter of the year under report. The shareholding held in Renabi GmbH previously amounted to 51 %.

The sole addition to at-equity companies involves a company at the Juwi subgroup which was previously included under other majority shareholdings and has been consolidated using the equity method since the 3rd quarter of the year under report.

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

	Reporting date rate		Average rate	
1 Euro	**30 Sep 2023**	30 Sep 2022	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022
Czech crown (CZK)	24.339	24.549	23.974	24.817
British pound (GBP)	0.865	0.883	0.870	0.847
US dollar (USD)	1.059	0.975	1.068	1.084
South African rand (ZAR)	19.981	17.535	19.411	17.131

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. For material intangible assets, scheduled amortisation is based on the following useful lives, broken down by asset classes typical to the Group:

Useful lives in years

Customer contracts and customer lists	4 – 28
Software and software licences	3 – 25
Other intangible assets	20 – 40

The useful lives stated above are reviewed and newly calculated each year.
With the exception of goodwill, there are no material intangible assets with useful lives classified as indefinite.

Decisions concerning useful lives are guided by economic considerations or contractual conditions.

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 expenses 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 if the asset in question requires a significant period of at least twelve months to be prepared for its intended use or sale. During the preparation phase, the net balance of income and expenses 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 for material items of property, plant and equipment is based on the following useful lives, broken down into asset classes typical to the Group:

Useful lives in years

Buildings	16 – 50
Technical equipment and machinery	10 – 44
Transmission grids	14 – 50
Plant and operating equipment	5 – 33

The useful lives stated above are reviewed and newly calculated each year.

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 years, as well as on expectations as to future market develop-ments. 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.

Other non-financial receivables and assets

Other non-financial receivables and assets include contract assets for project development, other contract assets, other tax receivables, prepaid expenses, emission rights and miscellaneous other non-financial assets.

Other contract assets are measured at amortised cost. The impairment requirements of IFRS 9 also apply to contract assets. A contract asset embodies a company's claim to consideration in return for goods or services which it has transferred to the customer. A contract asset becomes a receivable when the company's claim to consideration becomes unconditional. That is the case when the maturity of the consideration is dependent only on the passage of time.

CO_2 emission rights with remaining terms of less than a year which require purchase or exchange by MVV constitute intangible assets that are recognised at cost as other non-financial assets. Rights allocated free of charge are recognised at Euro 0.

Further information about other non-financial receivables and assets can be found in the comments on Note 26 Other Non-Financial Receivables and Assets.

Inventories

Inventories comprise raw materials and supplies, unfinished and finished products and services and project 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 comprises 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 another standard stipulates a different form of measurement, 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 that do not constitute discontinued operations 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 any temporary differences between the tax balance sheets and IFRS balance sheets at individual companies. These arise from the measurement of assets and liabilities for tax purposes and for external IFRS accounting, as well as from consolidated processes 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 utilisation of these losses carried forward is certain within a maximum forecast horizon of three 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.

Provisions for CO_2 emission rights are stated at the amortised cost of the (capitalised) CO_2 emission rights held or at the forward price of CO_2 emission rights already contractually agreed. If part of the obligation is not covered by available CO_2 emission rights, or by rights contractually agreed in a forward transaction, the provision for such obligation is measured at the market price of the CO_2 emission rights at the balance sheet date.

All non-current provisions are recognised at their expected settlement amounts as of the balance sheet. 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 the 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. Upon initial recognition, financial debt is carried at fair value taking due account of directly allocable transaction costs. In the case of trade payables and other financial liabilities, cost is equivalent to the transaction price or 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 as asset-side or liability-side derivative financial instruments. 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 in income from or expenses for derivative financial instruments. 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 within 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 or recognised as standalone derivatives.

Energy trading contracts intended to hedge future electricity price risks for proprietary generation plants and future gas price risks for stored gas are within 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 overall risk management for all energy trading contracts are within the scope of IFRS 9. Gains and losses from these energy trading contracts are netted and recognised as income from or expenses for derivative financial instruments.

As well as considering energy trading contracts, a decision also has to be made in some cases for other energy supply contracts and energy procurement contracts to ascertain whether they require treatment as derivative financial instruments under IFRS 9 or application of the own-use exemption. If they are within the scope of IFRS 9, such contracts are recognised as standalone derivatives.

Interest swaps intended to hedge future interest rate risks are within 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 twelve months. If both are the case, the assets and any associated liabilities have to be recognised and measured as “Assets and liabilities held for sale”.

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 date 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. MVV also generates significant revenues from services and photovoltaics and wind power project development. Revenues from contracts with customers are generally recognised upon delivery to the customer or upon performance of the service 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 claims are recognised as contract assets. If consideration received is higher than the services performed, a contract liability is recognised.

If one party is essentially 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. Grid operation services provided on the basis of the German Renewable Energies Act (EEG) are particularly relevant in this respect. In the case of feed-in remuneration, as grid operator MVV accepts the electricity from plant operators and makes this available to the transmission grid operator, which in turn markets it on the energy exchange. In this context, the respective sales are netted with cost of materials within the electricity product group, leading to an equivalent reduction in income and expenses. The impact of netting is dependent on the future market premium and compensation paid under the EEG legislation.

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 is presented in Note 42 Segment Reporting.

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 2023**	FY 2022
Electricity	2,978,618	3,208,871
Heat	492,355	437,633
Gas	1,934,142	1,228,810
Water	89,562	90,766
Project development	303,092	189,522
Other sales	821,279	767,986
	6,619,048	**5,923,588**

Timing of sales recognition

Euro 000s	FY 2023	FY 2022
Sales recognised over time	6,526,650	5,858,776
Electricity	2,978,618	3,208,871
Heat	492,355	437,633
Gas	1,934,142	1,228,810
Water	89,562	90,766
Project development	210,694	124,710
Other sales	821,279	767,986
Sales recognised at a point in time	92,398	64,812
Project development	92,398	64,812
	6,619,048	**5,923,588**

No fixed purchase volumes are agreed in many electricity, gas, heat and water supply agreements, meaning that the performance obligation involves providing and ensuring the ability to call up these products at all times. The associated sales are therefore recognised over time.

Other sales (sales by product group) mainly include revenues from waste incineration, operations management services, contracting 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. Sales from the sale of project rights, including those assigned by disposal of shares in project companies, are recognised at a point in time. If further services are subsequently performed in connection with project development, the supply and construction of wind turbines and photovoltaics systems or the construction of associated infrastructure, these sales are recognised over time. For reasons of transparency, starting in this financial year project development sales have been split in the above table into sales recognised over time and sales recognised at a point in time. The previous year's figures have been adjusted accordingly. Sales of Euro 110,375 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 105,957 thousand).

In group currency, sales at our foreign subsidiaries came to Euro 361,279 thousand (previous year: Euro 310,621 thousand). The increase in this share of sales is chiefly due to a higher 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. Income from derivative financial instruments

This line item comprises income from measurement items for derivative financial instruments deployed in operating activities. These involve commodity derivatives for electricity, gas, coal, CO_2, as well as other rights and currency derivatives. This valuation-dependent income is countered by valuation-dependent expenses. The year-on-year reduction is chiefly due to price changes and the resultant decrease in the values of energy trading transactions recognised under IFRS 9 as of the balance sheet date.

In the previous year, income from derivative financial instruments (Euro 4,635 thousand) was recognised under other operating income.

The most significant measurement item in the 2023 financial year resulted from the measurement of electricity commodity derivatives, which accounted for a 96 % share of the total line item (previous year: 85 %).

5. Other operating income

Other operating income

Euro 000s	**FY 2023**	FY 2022
Income from disposal of associates	77,643	16,094
Income from disposal of companies recognised at equity	57,745	42,354
Agency agreements and personnel supplies	27,437	9,079
Reversal of provisions	22,209	8,741
Reimbursements	21,557	4,837
Income from currency translation	17,250	12,226
Rental income	5,699	5,726
Employee benefits	4,111	3,143
Operating taxes (including energy taxes)	1,063	1,305
Income from sales of assets	958	665
Write-ups	–	2,692
Miscellaneous	21,973	19,409
	257,645	**126,271**

The income from the disposal of associates category includes income from the disposal of the Czech subgroup. In the previous year, income from the disposal of associates (Euro 16,094 thousand) was reported within other income from shareholdings.

The income from the sale of the strategic investment held in Stadtwerke Ingolstadt is reported in the income from disposal of companies recognised at equity category. In the previous year, income from the disposal of companies recognised at equity (Euro 42,354 thousand) was reported within income from companies recognised at equity.

Reimbursements include refunds of costs for insurance policies and contractual penalties.

The income from operating taxes mainly relates to refunds of energy taxes.

Income from currency translation arises in connection with the Group's operating activities.

Miscellaneous other operating income includes large numbers of other business transactions and income, such as income from 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 2023**	FY 2022
Minimum lease payments with maturities < 1 year	3,147	2,445
Minimum lease payments with maturities > 1 year and < 5 years	10,802	7,542
of which minimum lease payments > 1 year and < 2 years	2,801	2,183
of which minimum lease payments > 2 years and < 3 years	2,741	1,826
of which minimum lease payments > 3 years and < 4 years	2,643	1,815
of which minimum lease payments > 4 years and < 5 years	2,617	1,718
Minimum lease payments with maturities > 5 years	21,962	20,380

6. Cost of materials

Cost of materials

Euro 000s	**FY 2023**	FY 2022
Raw materials, supplies and purchased goods	4,544,791	4,515,565
Procurement of wind turbines and solar power systems	184,042	142,370
Purchased services	766,339	625,976
	5,495,172	**5,283,911**

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.

7. Employee benefit expenses

Employee benefit expenses

Euro 000s	**FY 2023**	FY 2022
Wages and salaries	445,467	414,967
Social security expenses and welfare expenses	72,941	71,933
Pension expenses	22,877	23,867
	541,285	**510,767**

MVV had an annual average of 6,260 employees (previous year: 6,517). This total includes 11 executives (previous year: 10), 5,922 employees (previous year: 6,167), 291 trainees (previous year: 305) and 36 interns/students (previous year: 35).

The executives are authorised representatives and division heads at MVV Energie AG.

8. Expenses for derivative financial instruments

This line item comprises expenses for measurement items for derivative financial instruments deployed in operating activities. These involve commodity derivatives for electricity, gas, coal, CO_2, as well as other rights and currency derivatives. These valuation-dependent expenses are countered by valuation-dependent income. The year-on-year reduction is chiefly due to price changes and the resultant decrease in the values of energy trading transactions recognised under IFRS 9 as of the balance sheet date. In the previous year, expenses for derivative financial instruments (Euro 4,507 thousand) were recognised under other operating expenses.

The most significant measurement item in the 2023 financial year resulted from the measurement of electricity commodity derivatives, which accounted for an 88 % share of the total line item (previous year: 96 %).

9. Other operating expenses

Other operating expenses

Euro	**FY 2023**	FY 2022
Contributions, fees and duties	47,070	38,901
Expenses for advisory services	35,255	31,245
Public relations expenses	34,746	14,049
Expenses for maintenance, repairs and IT services	30,930	21,637
Other services	24,926	12,488
Operating taxes (including energy taxes)	19,092	14,695
Expenses for currency translation	18,080	11,607
Other employee-related expenses	16,172	12,039
Rental, leasing, IT application and other recurring expenses	14,577	17,812
Pecuniary compensation to customers	11,583	–
Expenses in connection with the disposal of associates	2,222	–
Expenses for office materials and specialist literature	2,173	1,958
Miscellaneous	49,953	30,621
	306,779	**207,052**

In the 2023 financial year, the contributions, fees and duties category includes one-off expenses in a single-digit million euro amount for the windfall tax.

The expenses for operating taxes mainly include expenses for energy taxes relating to energy consumption.

Expenses for currency translation arise in connection with the Group's operating activities.

Miscellaneous other operating expenses include large numbers of other business transactions and expenses, such as vehicle pool costs and subsidy and sales promotion expenses.

10. 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 2023	FY 2022
Income from companies recognised at equity	21,683	22,159
Income from other shareholdings	2,174	766
Income from disposals of other shareholdings	–	690
	23,857	**23,615**

11. Depreciation and amortisation

Depreciation and amortisation

Euro 000s	FY 2023	FY 2022
Depreciation and amortisation	206,878	211,262
of which impairment losses	–	603

12. Financing income

Financing income

Euro 000s	FY 2023	FY 2022
Interest income from finance leases	2,954	3,368
Income from currency translation in connection with financing facilities	3,556	18,805
Income from derivative financial instruments	3,116	26
Interest income from current account, overnight and fixed-term deposits	7,770	975
Interest income from discounting provisions and liabilities	727	9,113
Other interest and similar income	17,983	4,165
	36,106	**36,452**

The income from currency translation in connection with financing facilities mainly results from the translation of group-internal financing facilities concluded in foreign currencies.

The income from derivative financial instruments is chiefly attributable to the measurement of currency derivatives serving to hedge group-internal financing facilities concluded in foreign currencies.

The increase in interest income from current account, overnight and fixed-term deposits is due among other factors to the higher level of interest rates.

The change in interest income from discounting provisions and liabilities principally results from a financial liability recognised at fair value through profit or loss in the previous year due to an increase in the discount rate applied.

The increase in other interest and similar income is primarily due to higher interest income resulting from the development in margins deposited in combination with the development in interest rates.

13. Financing expenses

Financing expenses

Euro 000s	FY 2023	FY 2022
Interest expenses for current account, non-current and current loans	35,334	40,885
Expenses for currency translation in connection with financing facilities	18,786	3,595
Expenses for derivative financial instruments	213	10,801
Interest expenses for compounding of provisions	3,796	1,154
Interest expenses for compounding lease liabilities	3,885	3,986
Other interest and similar expenses	15,396	11,255
	77,410	**71,676**

The other interest and similar expenses were reduced by Euro 1,011 thousand due to the capitalisation of borrowing interest (previous year: Euro 494 thousand). The financing cost thereby assumed amounted to around 1.0 % in the 2023 financial year and to between 1.8 % and 2.2 % in the previous year.

The reduction in interest expenses for current account, non-current and current loans is mainly due to the reduction in liabilities to banks.

The expenses for currency translation in connection with financing facilities chiefly result from the translation of group-internal financing facilities concluded in foreign currencies.

The expenses for derivative financial instruments are largely attributable to the measurement of currency derivatives serving to hedge group-internal financing facilities concluded in foreign currencies.

The expenses for compounding provisions principally relate to long-term personnel provisions.

The increase in other interest and similar expenses is primarily due to higher interest expenses resulting from the development in margins received in combination with the development in interest rates.

14. Taxes on income

Taxes on income

Euro 000s	FY 2023	FY 2022
Current taxes	228,005	67,752
Deferred taxes	40,555	– 79,149
	268,560	**– 11,397**

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 expenses are due on the one hand to tax expenses of Euro 7,059 thousand (previous year: Euro 10,048 thousand) attributable to changes in the deferred tax assets stated for losses carried forward and on the other to deferred tax expenses of Euro 33,496 thousand (previous year: Euro 89,197 thousand) attributable to the arising and/or reversal of temporary differences.

Tax expenses were reduced by Euro 3,838 thousand by using tax losses not previously recognised (previous year: Euro 4,293 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 2023**	FY 2022
Earnings before taxes (EBT)	**1,021,766**	**– 770**
Expected tax expenses based on a tax rate of 30.3 % (previous year: 30.3 %)	**309,595**	**– 233**
Deviations resulting from trade tax assessment base	2,232	1,749
Deviations from expected tax rate	– 16,793	3,390
Utilisation of losses carried forward, change in write-down for losses and losses for which no deferred taxes are recognised	– 3,229	7,922
Non-deductible expenses	20,862	2,407
Tax-exempt income	– 46,984	– 20,784
Income from companies recognised at equity	– 2,879	– 4,403
Permanent differences	7,109	1,735
Taxes for previous years	– 5,208	– 3,188
Miscellaneous	3,855	8
Effective tax expenses	**268,560**	**– 11,397**
Effective tax rate (%)	**26.3**	**1,480.1**

15. Share of earnings attributable to MVV Energie AG and earnings per share

Share of earnings attributable to MVV Energie AG shareholders and earnings per share

	FY 2023	FY 2022
Share of earnings attributable to MVV Energie AG shareholders (Euro 000s)	1,045,110	– 292,105
Number of shares (weighted average in 000s)	65,907	65,907
Earnings per share (Euro)	15.86	– 4.43
Dividend per share (Euro)	1.15	1.05
One-off dividend per share (Euro)	0.30	–

The total number of individual registered shares in MVV Energie AG amounts to 65,906,796.

The dividend for the 2023 financial year corresponds to the proposal made by the Executive Board and is dependent on approval by the Annual General Meeting on 8 March 2024. The proposal foresees distributing a regular dividend of Euro 75,793 thousand, as well as a one-off dividend of Euro 19,772 thousand to mark the 150th anniversary of MVV and its predecessor companies. The Supervisory Board will adopt its dividend proposal for submission to the Annual General Meeting in December 2023. The proposals concerning the level of dividend and the appropriation of profit for the 2022 financial year were accepted by the Annual General Meeting on 10 March 2023. A dividend of Euro 69,202 thousand was distributed.

Notes to Balance Sheet

16. Intangible assets

Intangible assets comprise customer contracts, software and other intangible assets, goodwill and advance payments. 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 in the 2023 financial year amounted to Euro 414 thousand (previous year: Euro 987 thousand). Development expenses capitalised under IAS 38 came to Euro 0 in the year under report (previous year: Euro 34 thousand). The development expenses capitalised in the previous year mainly involved the development of a global project database for solar and wind power projects at the Juwi subgroup.

The goodwill impairment tests performed in the 2023 financial year were based on determining the recoverable amounts of the groups of 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 after taxes (weighted costs of capital) of 6.0 % to 8.8 % (previous year: 5.1 % to 7.7 %). As in the previous year, a growth rate of 0.5 % has been assumed for the perpetuity included in the calculation.

Within a sensitivity analysis, the discount rate and the growth rate were each varied by 0.5 percentage points. At one cash generating sales unit, the surplus cover of the recoverable amount stood at Euro 2,669 thousand based on weighted costs of capital of 6.8 %. If the discount rate after taxes were to rise by 0.1 percentage point or if the growth rate were to decrease by 0.1 percentage point, with all other assumptions and parameters remaining unchanged, the carrying amount of this cash generating unit would exceed its recoverable amount.

The carrying amounts stated for goodwill are structured as follows:

Goodwill carrying amounts

Euro 000s	**30 Sep 2023**	30 Sep 2022
Juwi subgroup	84,497	79,076
Energieversorgung Offenbach subgroup	65,068	68,582
MVV Enamic subgroup	65,305	65,317
MVV Energie CZ subgroup	–	6,624
MVV Umwelt subgroup	3,081	3,080
Other subgroups	8,238	8,238
	226,189	**230,917**

The addition to goodwill at the Juwi subgroup is mainly due to the full consolidation of GEMdev S.r.l. The sale of the companies Frassur GmbH and MDW Muldendienst West GmbH led goodwill at the Energieversorgung Offenbach subgroup to decrease by Euro 3,514 thousand. The minor reduction of Euro 12 thousand at the MVV Enamic subgroup is attributable to the retrospective adjustment made to the initial consolidation balance sheet for the companies Avantag Energy S.à.r.l. and Decartec GmbH (previously: Philipp Rass Energy GmbH) in the past financial year. The disposal of the Czech subgroup led to a reduction in goodwill by Euro 6,624 thousand.

Intangible assets

Euro 000s	Customer contracts, software and other intangible assets	Goodwill	Advance payments	**Total**
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**
Gross value at 1 October 2022	274,842	285,896	25,257	585,995
Change in scope of consolidation	– 4,875	– 6,958	– 3	– 11,836
Currency adjustments	472	162	–	634
Additions	3,495	–	10,940	14,435
Disposals	– 6,922	–	– 1,847	– 8,769
Reclassifications	3,262	–	– 3,262	–
Gross value at 30 September 2023	**270,274**	**279,100**	**31,085**	**580,459**
Amortisation at 1 October 2022	– 214,811	– 54,979	–	– 269,790
Change in scope of consolidation	4,361	2,114	–	6,475
Currency adjustments	– 139	– 46	–	– 185
Scheduled amortisation	– 11,136	–	–	– 11,136
Disposals	6,847	–	–	6,847
Amortisation at 30 September 2023	**– 214,878**	**– 52,911**	**–**	**– 267,789**
Net value at 30 September 2023	**55,396**	**226,189**	**31,085**	**312,670**

17. 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 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	**531,259**	**2,027,202**	**45,398**	**351,528**	**2,955,387**
Gross value at 1 October 2022	1,051,810	5,280,917	181,123	352,030	6,865,880
Change in scope of consolidation	– 146,221	– 201,461	– 5,800	– 8,280	– 361,762
Currency adjustments	6,010	9,463	– 54	194	15,613
Additions	4,978	66,561	11,413	223,579	306,531
Subsidy payments received	– 47	– 4,838	– 133	–	– 5,018
Disposals	– 1,214	– 45,094	– 3,225	– 1,426	– 50,959
Reclassifications	5,220	131,200	1,558	– 132,266	5,712
Gross value at 30 September 2023	**920,536**	**5,236,748**	**184,882**	**433,831**	**6,775,997**
Depreciation at 1 October 2022	– 520,551	– 3,253,715	– 135,725	– 502	– 3,910,493
Change in scope of consolidation	77,128	142,885	5,183	242	225,438
Currency adjustments	– 2,134	– 4,328	39	– 4	– 6,427
Scheduled depreciation	– 22,767	– 145,308	– 10,353	–	– 178,428
Disposals	614	14,506	2,840	–	17,960
Reclassifications	–	– 390	390	–	–
Depreciation at 30 September 2023	**– 467,710**	**– 3,246,350**	**– 137,626**	**– 264**	**– 3,851,950**
Net value at 30 September 2023	**452,826**	**1,990,398**	**47,256**	**433,567**	**2,924,047**

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.

As in the previous year, no property, plant or equipment was provided as security for financial debt in the 2023 financial year. Property, plant and equipment of Euro 73,465 thousand is subject to restrictions on disposal (previous year: Euro 81,966 thousand).

Subsidy payments received mainly involve government grants received in the 2023 financial year chiefly in connection with urban planning measures for the relocation of gas and water pipelines and the laying of cables. Further government grants related to CHP subsidies and the expansion of charging infrastructure. 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 2023 financial year include the construction of plants to generate green heat, the construction of a sewage sludge treatment plant and measures to extend and renew our distribution grids to secure supply reliability.

Property, plant and equipment also include assets leased by MVV as the lessor within operating leases. At 30 September 2023, the carrying amounts attributable to these assets were subdivided as follows: land and buildings of Euro 7,050 thousand (previous year: Euro 9,808 thousand); technical equipment and machinery of Euro 6,359 thousand (previous year: Euro 4,793 thousand); advance payments and construction in progress of Euro 16 thousand (previous year: Euro 185 thousand); and plant and operating equipment of Euro 242 thousand (previous year: Euro 161 thousand).

18. 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**
Opening balance at 1 October 2022	119,636	889	4,872	19,957	22	35	145,411
Depreciation and amortisation	– 12,019	– 547	– 3,115	– 1,590	– 13	– 31	– 17,315
Additions	11,848	580	6,543	374	30	104	19,479
Other changes	– 6,401	– 148	– 628	–	– 4	– 1	– 7,182
Closing balance at 30 September 2023	**113,064**	**774**	**7,672**	**18,741**	**35**	**107**	**140,393**

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 2023**	FY 2022
Interest expenses for lease liabilities	3,885	3,986
Outflow of cash for leases	15,155	17,468
Expenses for short-term leases	1,829	1,048
Expenses for low-value leases	4,546	3,481
Expenses for variable lease payments	52	74
Income from sub-lease arrangements	140	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.

In the previous financial year, MVV had only one sale and leaseback transaction which was concluded in order to procure liquidity. In the current financial year, by contrast, there are no sale and leaseback transactions.

19. Investment properties

Investment properties involve a piece of land let out in the USA. Rental income in the 2023 financial year amounted to Euro 93 thousand (previous year: Euro 101 thousand). As in the previous year, direct operating expenses amounted to Euro 0 thousand. The fair value of the investment property approximates to its carrying amount.

Investment properties

Euro 000s	**FY 2023**	FY 2022
Gross value at 1 October	2,911	2,451
Currency adjustments	– 233	460
Gross value at 30 September	**2,678**	**2,911**
Depreciation at 1 October	–	–
Depreciation at 30 September	**–**	**–**
Net value at 30 September	**2,678**	**2,911**

20. Joint ventures

MVV operates joint ventures with partners. In view of its size and its influence on the Group, the following company has been identified as a material joint venture:

Grosskraftwerk Mannheim AG operates what is one of Europe's most efficient hard-coal-fired 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.

The assets, liabilities, equity, sales, annual net income and other comprehensive income at the material joint venture are presented in the following tables:

Statement of comprehensive income for material joint venture

	Grosskraftwerk Mannheim AG, Mannheim	
Euro 000s	**Financial year**	Previous year
Sales excluding energy taxes	1,541,759	1,007,201
Scheduled depreciation and amortisation	– 114,982	– 117,064
Interest income	69	–
Interest expenses	– 30,456	– 37,087
Income tax expenses/income	– 13,916	– 23,000
Annual net income	24,245	30,968
Other comprehensive income	145,180	9,693
Total comprehensive income for period	**169,425**	40,661

Further key financial figures for material joint venture

	Grosskraftwerk Mannheim AG, Mannheim	
Euro 000s	**Financial year**	Previous year
Assets	**2,070,786**	**2,017,183**
Non-current assets	1,266,125	1,427,019
Current assets	804,661	590,164
of which cash and cash equivalents	36,182	264
Equity and debt	**2,070,786**	**2,017,183**
Equity	346,289	176,864
Non-current provisions	507,149	733,023
Non-current debt and other liability items	467,384	530,425
of which non-current financial debt	380,000	480,000
Current provisions	498,520	437,204
Current debt and other liability items	251,444	139,667
of which current financial debt	56,796	69,870

Reconciliation of summarised key financial figures with carrying amounts of material joint venture

	Grosskraftwerk Mannheim AG, Mannheim	
Euro 000s	**Financial year**	Previous year
Net assets at 1 October	176,864	136,203
Profit/loss for period	24,245	30,968
Other comprehensive income	145,180	9,693
Net assets at 30 September	**346,289**	**176,864**
Group share of net assets	96,961	49,522
Other items	1,897	1,897
Carrying amount of interest in joint venture	**98,858**	**51,419**

Other comprehensive income at the material joint venture 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 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.

Stadtwerke Ingolstadt Beteiligungen GmbH was a material joint venture for MVV until its disposal in the 3rd quarter of the year under report. The carrying amount of the interest in the previous year amounted to Euro 88,837 thousand.

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	1,549	2,671
Other comprehensive income	– 1,836	1,608
Total comprehensive income for period	– 287	4,279
Carrying amount of interest in non-material joint ventures	**40,030**	**39,339**

21. 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	3,875	3,422
Total comprehensive income for period	3,875	3,422
Carrying amount of interest in non-material associates	**15,117**	**14,823**

The income from shareholdings collected by MVV from associates in the 2023 financial year amounted to Euro 595 thousand (previous year: Euro 962 thousand).

MVV's share of the contingent liabilities at associates amounted to Euro 1,437 thousand (previous year: Euro 1,521 thousand).

22. 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-controlling interests in the companies are presented in the following tables. The figures stated represent amounts prior to consolidation.

Statement of comprehensive income for subsidiaries with non-controlling interests - Energieversorgung Offenbach AG

Euro 000s	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022
Sales excluding energy taxes	668,043	521,402
Annual net income (+) / deficit (–)	– 268,456	271,641
Other comprehensive income	– 110,471	79,173
of which fair value measurement of financial instruments	– 111,013	72,377
of which actuarial gains and losses	542	6,796
Total comprehensive income for period	**– 378,927**	**350,814**
Total comprehensive income attributable to non-controlling interests	– 189,459	175,403
Dividends paid (to non-controlling shareholders)	10,666	8,963

Further key financial figures for subsidiaries with non-controlling interests - Energieversorgung Offenbach AG

Euro 000s	**30 Sep 2023**	30 Sep 2022
Assets	**544,215**	**1,179,403**
Non-current assets	344,692	563,984
Current assets	199,523	615,419
of which cash and cash equivalents	45,911	110,663
Equity and debt	**544,215**	**1,179,403**
Equity	177,874	578,135
of which fair value measurement of financial instruments	– 11,584	99,429
of which actuarial gains and losses	2,121	1,579
Non-current provisions	17,189	22,026
Non-current debt and other liability items	165,618	264,206
of which non-current financial debt	112,884	124,366
Current provisions	10,540	9,097
Current debt and other liability items	172,994	305,939
of which current financial debt	15,822	10,974

Statement of comprehensive income for subsidiaries with non-controlling interests - Stadtwerke Kiel AG

Euro 000s	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022
Sales excluding energy taxes	1,549,334	1,521,710
Annual net income (+) / deficit (–)	– 350,940	324,874
Other comprehensive income	– 685	9,387
of which fair value measurement of financial instruments	– 867	5,324
of which actuarial gains and losses	182	4,063
Total comprehensive income for period	**– 351,625**	**334,261**
Total comprehensive income attributable to non-controlling interests	– 172,296	163,788
Dividends paid (to non-controlling shareholders)	10,068	11,553

Further key financial figures for subsidiaries with non-controlling interests - Stadtwerke Kiel AG

Euro 000s	**30 Sep 2023**	30 Sep 2022
Assets	**1,030,718**	**2,318,507**
Non-current assets	757,681	1,145,131
Current assets	273,037	1,173,376
of which cash and cash equivalents	70,643	320,014
Equity and debt	**1,030,718**	**2,318,507**
Equity	367,735	739,906
of which fair value measurement of financial instruments	3,182	4,049
of which actuarial gains and losses	– 65	– 246
Non-current provisions	31,577	25,291
Non-current debt and other liability items	215,745	583,646
of which non-current financial debt	128,971	230,341
Current provisions	17,074	17,434
Current debt and other liability items	398,587	952,230
of which current financial debt	104,651	32,437

In the period under report, total non-controlling interests in the equity of subsidiaries amounted to Euro 300,713 thousand (previous year: Euro 728,278 thousand), of which Euro 172,732 thousand (previous year: Euro 355,249 thousand) related to Stadtwerke Kiel AG, Kiel, Euro 69,492 thousand (previous year: Euro 269,740 thousand) to Energieversorgung Offenbach AG, Offenbach am Main, and Euro 58,489 thousand (previous year: Euro 103,289 thousand) to non-material subsidiaries.

23. Other financial assets

Other financial assets mainly comprise other shareholdings that are recognised at fair value through profit or loss. This line item also includes interests in associates, as well as associates and joint ventures recognised as other shareholdings to the extent that these are recognised at amortised cost due to materiality considerations.

The development in other financial assets is presented in Note 10 Income from Companies Recognised at Equity and Other Income from Shareholdings and Note 41 Financial Instruments.

As in the previous year, there were no restrictions on disposal or other encumbrances.

24. Asset-side derivative financial instruments

The Group concludes commodity derivatives for electricity, gas, coal and CO_2, as well as other certificates and currency derivatives, in connection with its operating activities. In its financing activities, the Group concludes interest and currency derivatives to limit risks.

Asset-side derivative financial instruments

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Commodity derivatives	493,245	2,999,358	3,492,603	3,707,321	13,656,228	17,363,549
Interest derivatives	36,686	4,418	41,104	50,754	2,718	53,472
Currency derivatives	301	2,346	2,647	6,469	3,399	9,868
	530,232	**3,006,122**	**3,536,354**	**3,764,544**	**13,662,345**	**17,426,889**

Derivative financial instruments have been broken down into their respective hedge relationships and counterparties in the following tables.

Asset-side derivative financial instruments

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Asset-side derivative financial instruments	530,232	3,006,122	3,536,354	3,764,544	13,662,345	17,426,889
of which not involving IFRS 9 hedges	307,907	2,328,590	2,636,497	2,071,343	10,243,546	12,314,889
of which involving IFRS 9 hedges	222,325	677,532	899,857	1,693,201	3,418,799	5,112,000

Asset-side derivative financial instruments

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Asset-side derivative financial instruments						
from third parties	530,232	3,006,122	3,536,354	3,762,927	13,661,035	17,423,962
from companies recognised at equity	–	–	–	1,617	1,310	2,927
	530,232	**3,006,122**	**3,536,354**	**3,764,544**	**13,662,345**	**17,426,889**

Derivative financial instruments decreased sharply in value compared with the previous year. This was principally due to significant movements in market prices and the resultant reduction in the fair values of energy trading transactions recognised under IFRS 9.

In the previous year, derivative financial instruments (non-current: Euro 3,764,554 thousand; current: Euro 13,662,345 thousand) formed part of the other receivables and assets (including derivative financial instruments) line item in the balance sheet.

Further information can be found in Note 41 Financial Instruments.

25. Other financial receivables and assets

Other financial receivables and assets have been broken down into their respective contents and counterparties in the following tables.

Other financial receivables and assets

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Receivables from security deposits for energy trading transactions	–	138,982	138,982	–	36,235	36,235
Receivables from finance leases	42,545	9,777	52,322	43,601	9,435	53,036
Suppliers with debit balances	–	6,318	6,318	–	7,580	7,580
Loans	13,639	2,387	16,026	6,539	1,973	8,512
Cash investments	–	155,783	155,783	–	–	–
Miscellaneous other financial assets	4,326	7,781	12,107	5,134	7,346	12,480
	60,510	**321,028**	**381,538**	**55,274**	**62,569**	**117,843**

Other financial receivables and assets

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Other financial receivables and assets						
from third parties	46,942	319,409	366,351	48,982	25,017	73,999
from other majority shareholdings	4,913	1,049	5,962	4,174	1,317	5,491
from companies recognised at equity	8,304	570	8,874	1,742	36,235	37,977
from other shareholdings	351	–	351	376	–	376
	60,510	**321,028**	**381,538**	**55,274**	**62,569**	**117,843**

To reduce the counterparty risk involved in highly fluctuating fair values of energy trading contracts, security deposits are exchanged on the European Energy Exchange (EEX) and Intercontinental Exchange (ICE) marketplaces and with one external partner. These involve margins that are included in the receivables from security deposits for energy trading transactions line item. Receivables from security deposits rose year-on-year to Euro 138,982 thousand (previous year: Euro 36,235 thousand).

Loans are measured at amortised cost.

Cash investments, which involve fixed-term deposits with terms of more than three months and less than one year, are measured at amortised cost.

Finance leases are 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: 5.2 %). The average period for which interest rates remain fixed amounts to 4.7 years in the case of fixed-interest loans (previous year: 2.3 years) and to 5.0 years in the case of finance leases (previous year: 5.4 years).

In several contracting projects and housing concepts for data centres, MVV acts as the lessor in the context of finance 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 2023**	30 Sep 2022
Minimum lease payments with maturities < 1 year	12,565	12,105
Minimum lease payments with maturities > 1 year and < 5 years	33,890	37,814
of which minimum lease payments with maturities > 1 year and < 2 years	10,042	10,101
of which minimum lease payments with maturities > 2 years and < 3 years	9,774	10,301
of which minimum lease payments with maturities > 3 years and < 4 years	7,762	10,306
of which minimum lease payments with maturities > 4 years and < 5 years	6,312	7,106
Minimum lease payments with maturities > 5 years	19,750	14,222
Total minimum lease payments	**66,205**	**64,141**
Less financing income not yet realised	– 13,883	– 11,104
Net investments in finance leases	**52,322**	**53,037**

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 2023**	FY 2022
Financing income from net investment in lease	2,954	3,368
Profit or loss on sale	– 2,145	151

The costs of acquiring contracts (customer acquisition costs), which are capitalised pursuant to IFRS 15, form part of the miscellaneous other financial assets line item. 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 2023**	FY 2022
Balance at 1 October	708	626
Balance at 30 September	371	708

The write-downs and maturity structures for other financial receivables and assets have been presented in Note 41 Financial Instruments.

In the previous year, other financial receivables and assets (non-current: Euro 55,274 thousand; current: Euro 62,569 thousand) formed part of the other receivables and assets (including derivative financial instruments) line item. Non-current loans (Euro 6,539 thousand) and non-current receivables from finance lease arrangements (Euro 43,601 thousand) were reported under other financial assets in the previous year.

26. Other non-financial receivables and assets

Other non-financial receivables and assets have been broken down into their respective contents and counterparties in the following tables.

Other non-financial receivables and assets

	30 September 2023			30 September 2022		
Euro 000s	Non-current	Current	Total	Non-current	Current	Total
Project development contract assets	–	48,758	48,758	–	22,695	22,695
Other contract assets	2,904	20,072	22,976	2,940	12,882	15,822
Other tax receivables	–	91,352	91,352	–	113,419	113,419
Deferred expenses and accrued income	11,178	12,061	23,239	4,999	29,319	34,318
Emission rights	–	4,562	4,562	–	1,335	1,335
Miscellaneous other non-financial assets	2,605	9,060	11,665	3,050	3,790	6,840
	16,687	**185,865**	**202,552**	**10,989**	**183,440**	**194,429**

Other non-financial receivables and assets

	30 September 2023			30 September 2022		
Euro 000s	Non-current	Current	Total	Non-current	Current	Total
Other non-financial receivables and assets						
from third parties	16,687	185,805	202,492	10,989	166,375	177,364
from companies recognised at equity	–	60	60	–	17,065	17,065
	16,687	**185,865**	**202,552**	**10,989**	**183,440**	**194,429**

Project development contract assets showed a significant increase of due to Euro 26,063 thousand due to projects not yet settled. Other contract assets rose by Euro 7,154 thousand. This increase is chiefly due to projects not yet completed in several investment projects in which MVV is acting as the general contractor.

The opening and closing balances of contract assets recognised under IFRS 15 are presented in the following table:

Contract assets

Euro 000s	FY 2023	FY 2022
Balance at 1 October	38,517	94,387
Balance at 30 September	71,734	38,517

Other tax receivables mainly include input tax and energy tax credits.

The reduction in deferred expenses and accrued income largely results from an advance payment made in the previous year to Grosskraftwerk Mannheim for its coal stocking measures.

Emission rights include CO_2 emission rights which have to be purchased or exchanged by MVV, as well as rights allocated free of charge. Due to the development in prices and volumes, emission rights increased by Euro 3,227 thousand.

Miscellaneous other non-financial assets include expenses of Euro 2,243 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.

In the previous year, other non-financial receivables and assets (non-current: Euro 10,989 thousand; current: Euro 183,440 thousand) formed part of the other receivables and assets (including derivative financial instruments) line item.

27. Inventories

Inventories

Euro 000s	**30 Sep 2023**	30 Sep 2022
Raw materials and supplies	104,343	121,761
Finished and unfinished products and services (project rights)	83,964	94,816
Finished and unfinished products and services (other) and merchandise	67,175	56,451
Advance payments	42,801	39,703
Gas holdings	23,860	39,424
	322,143	**352,155**

Write-downs of Euro 4,556 thousand were recognised for inventories (previous year: Euro 1,195 thousand). Write-ups of Euro 636 thousand were included due to higher net disposal prices (previous year: Euro 2,015 thousand).

Advance payments relate to wind power and photovoltaics projects under construction.

Gas holdings consist of gas stored in caverns. The reduction in this line item is due to the decline in gas procurement prices compared with the previous year.

28. Trade receivables

Trade receivables

Euro 000s	**30 Sep 2023**	30 Sep 2022
Trade receivables	515,010	554,103
of which due from other majority shareholdings	131	16
of which due from companies recognised at equity	1,758	12,486
of which due from other shareholdings	1,742	694

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 41 Financial Instruments.

29. Income tax receivables

The income tax receivables of Euro 26,249 thousand (previous year: Euro 58,236 thousand) mainly relate to corporate income tax and trade tax refund claims. These have been recognised at nominal value.

30. Cash and cash equivalents

Cash and cash equivalents predominantly comprise balances at banks. The outflows of security deposits for counterparty default risk (margins) requiring payment by MVV in the period under report led to a reduction in cash and cash equivalents by Euro 1,400,040 thousand (previous year: inflow of Euro 595,307 thousand). The acquisition of fully consolidated companies and other business units resulted in the addition of cash and cash equivalents of Euro 80 thousand (previous year: Euro 2,049 thousand). The disposal of fully consolidated companies and other business units led to the retirement of cash and cash equivalents of Euro 11,455 thousand (previous year: Euro 2,530 thousand).

Within the framework of short-term liquidity management structures, credit balances are exclusively deposited at banks of impeccable creditworthiness.

31. 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. At 30 September 2023, the City of Mannheim directly and indirectly owned 50.10 % of the shares, 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. Expenses of Euro 573,217 thousand were recognised directly in equity in the financial year under report in connection with the fair value measurement of financial instruments (previous year: income of Euro 676,473 thousand). For non-controlling interests, expenses of Euro 100,444 thousand were recognised directly in equity for the fair value measurement of financial instruments (previous year: income of Euro 69,424 thousand).

32. Provisions

Provisions

Euro 000s	Balance at 1 Oct 2022	Change in scope of consoli-dation	Currency adjust-ments	Utilised	Reversed	Added	Changes within equity	Reclassi-fied	Interest compo-nent	**Balance at 30 Sep 2023**
Non-current provisions										
Pensions and similar obligations	**75,381**	**– 76**	**– 1**	**– 3,265**		**2,923**	**– 4,486**	**–**	**2,669**	**73,145**
Personnel-related obligations	8,973	– 85	1	– 1,036	– 412	1,103	–	– 507	– 125	7,912
Refurbishment, dismantling and warranty obligations	40,241	– 1,106	132	– 13	– 230	5,981	– 1,226	– 51	502	44,230
Provisions for litigation and contract risks	3,033	–	–	– 302	– 762	971	–	– 35	11	2,916
Miscellaneous contingencies	20,076	–	–	– 2,197	– 7,200	751	–	– 3,368	15	8,077
Total other provisions	**72,323**	**– 1,191**	**133**	**– 3,548**	**– 8,604**	**8,806**	**– 1,226**	**– 3,961**	**403**	**63,135**
Total non-current provisions	**147,704**	**– 1,267**	**132**	**– 6,813**	**– 8,604**	**11,729**	**– 5,712**	**– 3,961**	**3,072**	**136,280**
										–
Current provisions										**–**
Tax provisions	**1,054**	**–**	**11**	**– 518**	**– 1**	**4,261**	**–**	**–**	**–**	**4,807**
Other provisions										–
Personnel-related obligations	44,446	– 515	– 257	– 38,984	– 2,225	54,168	–	507	–	57,140
Services not yet invoiced	95,633	–	– 137	– 92,012	– 1,837	101,855	–	–	–	103,502
Refurbishment, dismantling and warranty obligations	8,972	– 109	– 245	– 1,677	– 480	1,980	–	51	–	8,492
Provisions for litigation and contract risks	8,333	– 424	– 134	– 5,001	– 1,370	1,027	–	35	–	2,466
Miscellaneous contingencies	45,531	– 710	16	– 25,147	– 7,691	30,794	–	3,368	–	46,161
Total other provisions	**202,915**	**– 1,758**	**– 757**	**– 162,821**	**– 13,603**	**189,824**	**–**	**3,961**	**–**	**217,761**
Total current provisions	**203,969**	**– 1,758**	**– 746**	**– 163,339**	**– 13,604**	**194,085**	**–**	**3,961**	**–**	**222,568**
										–
Total provisions	**351,673**	**– 3,025**	**– 614**	**– 170,152**	**– 22,208**	**205,814**	**– 5,712**	**–**	**3,072**	**358,848**

Provisions broken down by maturity

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Provisions for pensions and similar obligations	73,145	–	73,145	75,381	–	75,381
Tax provisions	–	4,807	4,807	–	1,054	1,054
Personnel-related obligations	7,912	57,140	65,052	8,973	44,446	53,419
Services not yet invoiced	–	103,502	103,502	–	95,633	95,633
Refurbishment, dismantling and warranty obligations	44,230	8,492	52,722	40,241	8,972	49,213
Provisions for litigation and contract risks	2,916	2,466	5,382	3,033	8,333	11,366
Miscellaneous contingencies	8,077	46,161	54,238	20,076	45,531	65,607
	136,280	**222,568**	**358,848**	**147,704**	**203,969**	**351,673**

As of the reporting date, tax provisions mainly include other tax provisions for value added taxes and electricity taxes.

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 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 photovoltaics 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 3.0 % and 4.2 % (previous year: 1.0 % and 3.8 %.

33. Provisions for pensions 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 thereby 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 2024 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 compensation. The amount of compensation 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. In the 2023 financial year, payments of 38,071 thousand were made to state pension systems (previous year: Euro 37,560 thousand). Moreover, an amount of Euro 16,754 thousand was paid into defined contribution pension schemes (previous year: Euro 16,777 thousand).

Furthermore, there are direct pension obligations resulting from former collective agreements (measured in terms of duration of company service and employee remuneration), 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 at 30 September 2023 are:

Parameter

	FY 2023	FY 2022
Discount rate	4.2 %	3.8 %
Future pay rises	2.5-3.0 %	2.5-3.0 %
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 2023**	FY 2022
Service cost	3,270	4,127
Interest expense	2,669	1,082
	5,939	**5,209**

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 2023			30 September 2022
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	76,642	1,261	75,381	96,870	826	96,044
Current service cost	3,270	–	3,270	4,127	–	4,127
Retrospective service cost	–	–	–	–	–	–
Interest expenses (interest income)	2,669	–	2,669	1,082	–	1,082
Remeasurement						
(i) Income from plan assets (excluding amounts included in interest income from plan assets)	–	32	– 32	–	8	– 8
(ii) Actuarial gains/losses						
of which due to changes in financial assumptions	– 4,664	– 21	– 4,643	– 35,955	– 26	– 35,929
of which due to changes in demographic assumptions	–	–	–	–	–	–
of which due to changes in experience adjustments	156	–	156	502	–	502
Payments made to beneficiaries	– 3,265	–	– 3,265	– 3,233	–	– 3,233
Employer contributions	–	315	– 315	–	453	– 453
Change in scope of consolidation	– 76	–	– 76	–	–	–
Reclassifications	–	–	–	13,249	–	13,249
Balance at 30 September	**74,732**	**1,587**	**73,145**	**76,642**	**1,261**	**75,381**

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 2023**	FY 2022
Present value of defined benefit obligation	74,732	76,642
Fair value of plan assets	1,587	1,261
Provisions recognised at 30 September	**73,145**	**75,381**

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 2023**	FY 2022
Accumulated actuarial gains (+) and losses (-) recognised in equity at 1 October	1,354	– 20,720
Actuarial gains (+) and losses (-) recognised in equity	1,821	22,074
Accumulated actuarial gains (+) and losses (-) recognised in equity at 30 September	**3,175**	**1,354**

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 5,382 thousand are forecast for existing pension obligations in the 2024 financial year.

In the financial year, use was made of a discount rate appropriate to the expected weighted remaining term of 13 years.

The expected maturity of undiscounted pension payments at the balance sheet date was as follows:

Expected pension payments

Euro 000s	
2024	5,382
2025	6,581
2026	10,816
2027	4,183
2028	5,,557
>2028	76,503
	109,022

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 6 %
Future pay rises	0.5	Increase by 1 %	Reduction by 1 %
Future pension increases	0.5	Increase by 2 %	Reduction by 2 %
Mortality	1 year	Increase by 3 %	–

34. Financial debt

Financial debt

			30 September 2023			30 September 2022
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liabilities						
to banks	1,379,073	251,057	1,630,130	1,581,379	162,744	1,744,123
in connection with leases	122,468	14,302	136,770	125,463	14,748	140,211
to other majority shareholdings	–	838	838	–	719	719
to companies recognised at equity	–	–	–	–	1,301	1,301
to other shareholdings	–	1,300	1,300	–	900	900
Other financial debt	25,865	3,066	28,931	26,267	3,414	29,681
	1,527,406	**270,563**	**1,797,969**	**1,733,109**	**183,826**	**1,916,935**

Maturity in years

			30 September 2023			30 September 2022
Euro 000s	**< 1 year**	**1 - 5 years**	**> 5 years**	< 1 year	1 - 5 years	> 5 years
Liabilities						
to banks	251,057	547,399	831,674	162,744	703,137	878,242
in connection with leases	14,302	46,822	75,646	14,748	44,209	81,254
to other majority shareholdings, companies recognised at equity and other shareholdings	2,138	–	–	2,920	–	–
Other financial debt	3,066	14,001	11,864	3,414	14,524	11,743
	270,563	**608,222**	**919,184**	**183,826**	**761,870**	**971,239**

The fixed-rate liabilities to banks of Euro 1,162,540 thousand (previous year: Euro 1,290,250 thousand) have an average interest rate of 1.5 % (previous year: 1.5 %), while the floating-rate liabilities to banks of Euro 467,590 thousand (previous year: Euro 453,874 thousand) have an average interest rate of 3.8 % (previous year: 2.4 %). 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 2023, MVV had undrawn committed credit lines of Euro 1,578,652, thousand (previous year: Euro 1,417,087 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 18 Leases as Lessee.

35. Liability-side derivative financial instruments

The Group concludes commodity derivatives for electricity, gas, coal and CO_2, as well as other certificates and currency derivatives, in connection with its operating activities. In its financing activities, the Group concludes interest and currency derivatives to limit risks.

Liability-side derivative financial instruments

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Commodity derivatives	486,684	2,948,099	3,434,783	3,427,789	13,170,921	16,598,710
Interest derivatives	–	–	–	48	–	48
Currency derivatives	1,123	2,368	3,491	192	6,825	7,017
	487,807	**2,950,467**	**3,438,274**	**3,428,029**	**13,177,746**	**16,605,775**

Derivative financial instruments have been broken down into their respective hedge relationships and counterparties in the following tables.

Liability-side derivative financial instruments

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liability-side derivative financial instruments	487,807	2,950,467	3,438,274	3,428,029	13,177,746	16,605,775
of which not involving IFRS 9 hedges	278,693	2,233,513	2,512,206	2,200,297	10,210,293	12,410,590
of which involving IFRS 9 hedges	209,114	716,954	926,068	1,227,732	2,967,453	4,195,185

Liability-side derivative financial instruments

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liability-side derivative financial instruments	487,807	2,950,467	3,438,274	3,428,029	13,177,746	16,605,775
to third parties	487,807	2,950,467	3,438,274	3,425,706	13,172,184	16,597,890
to companies recognised at equity	–	–	–	2,323	5,562	7,885
	487,807	**2,950,467**	**3,438,274**	**3,428,029**	**13,177,746**	**16,605,775**

Derivative financial instruments decreased sharply in value compared with the previous year. This was principally due to significant movements in market prices and the resultant reduction in the fair values of energy trading transactions recognised under IFRS 9.

In the previous year, derivative financial instruments (non-current: Euro 3,428,029 thousand; current: Euro 13,177,746 thousand) formed part of the other liabilities (including derivative financial instruments) line item in the balance sheet.

Further information can be found in Note 41 Financial Instruments.

36. Other financial liabilities

Other financial liabilities have been broken down into their respective contents and counterparties and presented in the tables below. After initial recognition, financial liabilities are measured at amortised cost using the effective interest method.

Other financial liabilities

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liabilities to employees	–	31,628	31,628	–	32,500	32,500
Customer credit balances	–	15,594	15,594	–	18,028	18,028
Interest liabilities	–	7,738	7,738	–	7,734	7,734
Liabilities for security deposits for energy trading transactions	–	155,983	155,983	–	1,453,276	1,453,276
Concession duties	–	1,498	1,498	–	2,938	2,938
Miscellaneous other financial liabilities	28,245	42,069	70,314	19,379	25,642	45,021
	28,245	**254,510**	**282,755**	**19,379**	**1,540,118**	**1,559,497**

Other financial liabilities

		30 September 2023			30 September 2022	
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Other financial liabilities	28,245	254,510	282,755	19,379	1,540,118	1,559,497
of which to third parties	28,245	253,825	282,070	19,379	1,539,935	1,559,314
of which to other majority shareholdings	–	533	533	–	6	6
of which to companies recognised at equity	–	152	152	–	177	177
of which to other shareholdings	–	–	–	–	–	–
	28,245	**254,510**	**282,755**	**19,379**	**1,540,118**	**1,559,497**

To reduce the counterparty risk involved in highly fluctuating fair values of energy trading contracts, security deposits are exchanged on the European Energy Exchange (EEX) and Intercontinental Exchange (ICE) marketplaces and with one external partner. These involve margins that are included in the liabilities from security deposits for energy trading transactions line item. Liabilities of Euro 155,983 thousand were recognised for security deposits at the reporting date on 30 September 2023 (previous year: Euro 1,453,276 thousand).

Miscellaneous other financial liabilities mainly relate to liabilities for earn-out obligations and deferred liabilities.

In the previous year, other financial liabilities (non-current: Euro 19,379 thousand; current: Euro 1,540,118 thousand) formed part of the other liabilities (including derivative financial instruments) line item in the balance sheet.

Further information can be found in Note 41 Financial Instruments.

37. Other non-financial liabilities

Other non-financial liabilities have been broken down into their respective contents and counterparties and presented in the tables below. After initial recognition, non-financial liabilities are measured at amortised cost using the effective interest method.

Other non-financial liabilities

	30 September 2023			30 September 2022		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Contract liabilities for advance payments received	–	131,035	131,035	1,049	95,847	96,896
Contract liabilities for building cost grants	153,013	10,171	163,184	125,320	8,377	133,697
Other contract liabilities	9,785	8,863	18,648	10,573	14,529	25,102
Liabilities in connection with German Fuel Emissions Trading Act (BEHG)	626	24,532	25,158	502	23,348	23,850
Liabilities for other taxes	–	34,963	34,963	–	86,409	86,409
Liabilities due to German Natural Gas Heat Emergency Aid (EWSG) and Electricity Price Cap (StromPBG) Acts	–	31,104	31,104	–	–	–
Social security liabilities	–	450	450	–	1,086	1,086
Miscellaneous other non-financial liabilities	15,173	2,737	17,910	5,637	1,908	7,545
	178,597	**243,855**	**422,452**	**143,081**	**231,504**	**374,585**

Other non-financial liabilities

	30 September 2023			30 September 2022		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liabilities	178,597	112,820	291,417	142,032	135,657	277,689
of which to third parties	178,430	112,820	291,250	141,865	135,657	277,522
of which to companies recognised at equity	167	–	167	167	–	167
Advance payments received for orders	–	131,035	131,035	1,049	95,847	96,896
of which from third parties	–	131,033	131,033	1,049	95,632	96,681
of which from companies recognised at equity	–	–	–	–	213	213
of which from other shareholdings	–	2	2	–	2	2
	178,597	**243,855**	**422,452**	**143,081**	**231,504**	**374,585**

Other contract liabilities showed a year-on-year reduction as of 30 September 2023. This is due to the almost full completion of projects in the photovoltaics systems planning and construction business.

The opening and closing balances of contract liabilities recognised under IFRS 15 are presented in the following table:

Contract liabilities

Euro 000s	**FY 2023**	FY 2022
Balance at 1 October	255,694	241,253
Balance at 30 September	**312,867**	**255,694**

MVV expects that, of the transaction price allocated to unsatisfied performance obligations at 30 September 2023, an amount of Euro 150,068 thousand (previous year: Euro 118,752 thousand) will be recognised as revenues in the next reporting period. The remaining amount of Euro 162,797 thousand (previous year: Euro 136,942 thousand) will be recognised in subsequent financial years.

At 30 September 2023, liabilities for other taxes chiefly include value added and energy tax liabilities. Miscellaneous other non-financial liabilities mainly involve payments by co-shareholders towards the future decarbonisation of district heat.

In the previous year, other non-financial liabilities (non-current: Euro 143,081 thousand; current: Euro 231,504 thousand) formed part of the other liabilities (including derivative financial instruments) line item in the balance sheet. Furthermore, in the previous year social security liabilities (current: Euro 1,086 thousand) were reported under other financial liabilities in the other liabilities (including derivative financial instruments) line item in the balance sheet.

38. Trade payables

Trade payables

Euro 000s	**30 Sep 2023**	30 Sep 2022
Trade payables	471,570	507,216
of which to other majority shareholdings	775	263
of which to companies recognised at equity	7,109	7,644
of which to other shareholdings	401	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 .

39. Income tax liabilities and deferred taxes

This line item includes income tax liabilities of Euro 126,838 thousand (previous year: Euro 39,384 thousand). The deferred taxes reported for the 2023 financial year relate to the following items:

Deferred taxes

	30 September 2023		30 September 2022	
Euro 000s	**Deferred tax assets**	**Deferred tax liabilities**	Deferred tax assets	Deferred tax liabilities
Intangible assets	8,473	– 9,448	8,690	– 10,734
Property, plant and equipment	32,163	– 185,777	27,940	– 197,870
Right-of-use assets	–	– 38,203	–	– 42,641
Inventories	22,955	– 4,232	19,530	– 8,105
Asset-side derivative financial instruments	241	– 1,357,420	966	– 6,582,981
Other financial and non-financial receivables and assets	68,151	– 36,450	24,410	– 42,732
Provisions for pensions	9,093	–	7,016	–
Non-current other provisions	7,409	–	15,306	–
Current other provisions	11,400	– 19,469	11,417	– 24,193
Liability-side derivative financial instruments	1,289,224	–	6,307,328	– 5,716
Other financial and non-financial liabilities	106,352	– 122,169	502,234	– 502,444
Lease liabilities	37,256	–	44,640	–
Losses carried forward	28,956	–	36,015	–
Deferred taxes (gross)	1,621,673	– 1,773,168	7,005,492	– 7,417,416
Netting	– 1,574,398	1,574,398	– 6,890,273	6,890,273
Deferred taxes (net)	**47,275**	**– 198,770**	**115,219**	**– 527,143**

The deferred tax liabilities of Euro – 1,542 thousand reported as a special item in the previous year were reclassified to property, plant and equipment in the year under report.

Of the (net) deferred taxes presented above, Euro 10,141 thousand (previous year: Euro 26,741 thousand) relate to non-current deferred tax assets and Euro 53,841 thousand (previous year: Euro 133,194 thousand) to non-current deferred tax liabilities.

No deferred tax assets have been recognised for corporate income tax loss carryovers of Euro 67,683 thousand (previous year: Euro 62,131 thousand), trade tax loss carryovers of Euro 54,993 thousand (previous year: Euro 42,845 thousand) or foreign loss carryovers of Euro 143,815 thousand (previous year: Euro 186,152 thousand). Of foreign loss carryovers, Euro 668 thousand lapses after nine years, while Euro 27,002 thousand lapses after twelve to nineteen years.

For temporary differences of Euro 7,954 thousand at shareholdings (previous year: Euro 10,505 thousand), no deferred tax liabilities have been stated for an amount of Euro 2,410 thousand (previous year: Euro 3,183 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 8,914 thousand (previous year: Euro 2,965 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 exclusively depends on the generation of future profits. Such realisation is chiefly attributable to restructuring measures, as well as to the prompt marketing of renewable energies projects. Any surplus of deferred tax assets from temporary differences is only recognised when it is recoverable.

In the 2023 financial year, deferred taxes of Euro 14,310 thousand (credit balance) were recognised directly in other comprehensive income as part of group equity (previous year: debit balance of Euro 275,173 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 2023		30 September 2022	
Euro 000s	**Income tax**	**Gross**	Income tax	Gross
Actuarial gains and losses	– 2,247	4,486	– 8,513	35,426
Share of total comprehensive income attributable to companies recognised at equity	–	39,692	–	3,634
Items that will not be reclassified to profit or loss	**– 2,247**	**44,178**	**– 8,513**	**39,060**
Cash flow hedges/hedging costs	290,321	– 963,936	– 311,511	1,057,407
Currency translation differences	–	10,908	–	– 2,476
Share of total comprehensive income attributable to companies recognised at equity	–	– 1,249	–	– 898
Items that will be reclassified to profit or loss	**290,321**	**– 954,277**	**– 311,511**	**1,054,033**

40. Contingent assets, contingent liabilities and financial obligations

The volume of obligations for contingent liabilities, contingent assets and financial obligations stated below corresponds to the scope of liability at the balance sheet date.

Contingent liabilities involve possible obligations to third parties or existing obligations for which an outflow of resources is not probable or whose amount cannot be determined with sufficient reliability. Contingent assets are defined as possible assets that arise from past events, the existence of which will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events. Neither contingent liabilities nor contingent assets are recognised in the balance sheet.

The company has contingent liabilities of Euro 9.9 million for warranty agreements (previous year: Euro 7.4 million). It has obligations of this nature in the form of guarantees amounting to Euro 9.9 million (previous year: Euro 9.5 million). As in the previous year, no collateral has been provided for third-party liabilities.

MVV has purchase commitments of Euro 95.5 million in connection with investment orders placed and financial obligations (previous year: Euro 132.4 million).

The Group has a contingent asset 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).

41. 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 2023	30 Sep 2022
Assets			
Other financial assets			
of which other shareholdings	Fair value through profit or loss	8,373	6,104
of which other shareholdings	Not applicable	5,168	2,721
of which securities	Fair value through profit or loss	–	204
Trade receivables < 1 year	Amortised cost	515,010	554,103
Asset-side derivative financial instruments			
of which derivatives outside hedge accounting	Fair value through profit or loss	2,636,497	12,314,889
of which derivatives within hedge accounting	Not applicable	899,857	5,112,000
Other financial receivables and assets			
of which loans	Amortised cost	16,026	8,512
of which finance lease receivables	Not applicable	52,322	53,037
of which miscellaneous other financial receivables and assets	Amortised cost	313,190	56,295
Cash and cash equivalents	Amortised cost	975,026	1,884,998
		5,421,469	**19,992,863**
Liabilities			
Financial debt			–
of which financial debt involving leases	Not applicable	136,770	140,211
of which other financial debt	Amortised cost	1,661,199	1,776,724
Trade payables < 1 year	Amortised cost	471,570	507,216
Liability-side derivative financial instruments			
of which derivatives outside hedge accounting	Fair value through profit or loss	2,512,206	12,410,590
of which derivatives within hedge accounting	Not applicable	926,068	4,195,185
Other financial liabilities			
of which other financial liabilities	Amortised cost	257,568	1,543,115
of which other financial liabilities	Fair value through profit or loss	25,187	16,382
		5,990,568	**20,589,423**

Given the predominantly short-term remaining terms of trade receivables and payables, loans, miscellaneous other financial receivables and assets, other financial liabilities and cash and cash equivalents, their carrying amounts at the balance sheet date basically correspond to their fair values. Variances relate to finance lease receivables and other financial debt. The carrying amount of finance lease receivables amounts to Euro 52,322 thousand (previous year: Euro 53,037 thousand) while their fair value stands at Euro 42,499 thousand (previous year: Euro 60,328 thousand). The carrying amount of financial debt amounts to Euro 1,661,199 thousand (previous year: Euro 1,776,724 thousand), while its fair value stands at Euro 1,892,496 thousand (previous year: Euro 1,624,158 thousand).

The fair value of finance lease receivables and 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 under Accounting Policies.

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 2023

Euro 000s	**Level 1**	**Level 2**	**Level 3**
Financial assets			
Other shareholdings	–	–	8,373
Derivatives outside hedge accounting	2,578,172	53,416	4,909
Derivatives within hedge accounting	606,918	287,432	5,507
Financial liabilities			
Derivatives outside hedge accounting	2,349,348	162,774	84
Derivatives within hedge accounting	700,006	224,773	1,289
Other financial liabilities	–	–	25,187

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
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

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 method 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 relate to commodity 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 procurement contract. The fair value of this derivative amounts to Euro 3,075 thousand (previous year: Euro 18,750 thousand). Any change in the market price by 40 % upwards or downwards (previous year: 45 %) would increase or decrease the fair value by Euro 3,886 thousand respectively (previous year: Euro 12,132 thousand).

The derivatives of Euro 4,219 thousand in Level 3 hedge accounting mainly include interest swaps with floor (previous year: Euro 5,217 thousand). The fair value of these derivatives amounts to Euro 4,418 thousand (previous year: Euro 5,217 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 1 thousand (previous year: Euro 4 thousand) or reduce it by Euro 1 thousand (previous year: Euro 3 thousand).

Other Level 3 liabilities include variable purchase price components resulting from acquisitions. Their fair value is determined using the discounted cash flow method. 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 2022**	**Gains/losses in income statement**	**Gains/losses in OCI**	**Additions/ disposals**	**Balance at 30 Sep 2023**
Financial assets					
Other shareholdings	6,104	2,182	–	87	8,373
Derivatives outside hedge accounting	18,881	– 12,380	–	– 1,592	4,909
Derivatives within hedge accounting	5,690	–	3,460	– 3,643	5,507
Financial liabilities					
Derivatives outside hedge accounting	1,251	– 361	–	– 806	84
Derivatives within hedge accounting	473	–	2,743	– 1,927	1,289
Other financial liabilities	16,382	8,905	–	– 100	25,187

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

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 2023**
Other operating income and expenses	– 20,758	– 20,904
Income from shareholdings	2,182	2,182
Financial result	– 166	– 166
Other comprehensive income	717	4,218
	– 18,025	**– 14,670**

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**

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 margins 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 2023

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: Financial instruments	Related amounts not netted in balance sheet: Cash collateral received/granted	Net amount
Loans	16,026	–	16,026	–	–	16,026
Securities	–	–	–	–	–	–
Trade receivables < 1 year	549,821	– 34,811	515,010	–	–	515,010
Derivative financial instruments	3,536,354	–	3,536,354	– 3,072,926	– 284,664	178,764
Miscellaneous other financial receivables and assets	313,190	–	313,190	–	– 173	313,017
Cash and cash equivalents	975,026	–	975,026	– 145,223	–	829,803
	5,390,417	**– 34,811**	**5,355,606**	**– 3,218,149**	**– 284,837**	**1,852,620**

Netting of financial liabilities at 30 September 2023

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: Financial instruments	Related amounts not netted in balance sheet: Cash collateral received/granted	Net amount
Other financial debt	1,661,199	–	1,661,199	145,223	2,458	1,513,518
Trade payables < 1 year	506,381	34,811	471,570	–	–	471,570
Derivative financial instruments	3,438,274	–	3,438,274	3,072,926	267,664	97,684
Other financial liabilities	282,755	–	282,755	–	–	282,755
	5,888,609	**34,811**	**5,853,798**	**3,218,149**	**270,122**	**2,365,527**

Netting of financial assets at 30 September 2022

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	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
Miscellaneous other financial receivables and 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

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	1,776,724	–	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**

Net results by measurement category

The following net results have been recognised by measurement category in the income statement:

Net results

Euro 000s	**FY 2023**	FY 2022
Financial assets and liabilities measured at fair value through profit or loss	679,197	124,204
of which mandatorily measured at fair value	679,197	124,204
Financial assets measured at amortised cost	– 34,356	– 5,536
Financial liabilities measured at amortised cost	4,166	993

The net results from financial assets and financial liabilities measured at fair value through profit or loss mainly comprise results of the market valuation of commodity derivatives. The net results from financial assets and liabilities measured at fair value through profit or loss are recognised in the income statement.

The net results from the financial assets measured at amortised cost category (excluding the interest result presented below) principally consist of impairment losses and of currency translation income and expenses.

The net results from the financial liabilities measured at amortised cost category (excluding the interest result presented below) largely comprise currency translation income and expenses.

The total interest income and expenses for financial assets and financial liabilities that are not measured at fair value through profit or loss are presented in the following table:

Total interest income and expenses

Euro 000s	**FY 2023**	FY 2022
Total interest income	25,721	5,132
of which from financial assets and liabilities measured at amortised cost	25,721	5,132
Total interest expenses	61,219	44,838
of which for financial assets and liabilities measured at amortised cost	61,220	44,838

The interest income from financial assets and liabilities that are measured at amortised cost is chiefly attributable to interest paid on current accounts, overnight and fixed-term deposits, as well as to other interest and similar income.

The interest expenses for financial and liabilities that are measured at amortised cost largely result from loan obligations, as well as from other interest and similar expenses.

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 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 strict 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 MVV's risk management system 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 direct default risk 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 allowance 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 mostly 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 credit-worthiness 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 performed 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 2023**	FY 2022
Balance at 1 October	31,551	21,555
Net balance of additions/reversals	11,898	18,220
Retirements	– 4,479	– 8,068
Change in scope of consolidation	– 565	– 12
Other	84	– 144
Balance at 30 September	**38,489**	**31,551**

Of the above loss allowance, Euro 37,328 thousand is attributable to trade receivables (previous year: Euro 30,551 thousand), Euro 841 thousand to contract assets (previous year: Euro 709 thousand) and Euro 320 thousand to lease receivables (previous year: Euro 291 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 broken down by age group and presented in the table below:

Receivables default risks (simplified approach) at 30 September 2023

Euro 000s	**Gross carrying amount**	**Loss allowance**	**Credit default rate**
Not overdue	491,362	7,761	1.6%
Overdue by			
< 89 days	42,184	7,926	18.8%
90 to 179 days	5,553	3,088	55.6%
180 to 359 days	5,569	4,043	72.6%
> 359 days	16,021	15,544	97.0%
	560,689	**38,362**	

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%
> 359 days	21,873	19,868	90.8%
	525,386	**31,402**	

Impairments of Euro 127 thousand relate to assets whose loss allowances were determined on the basis of an internal or external rating (previous year: Euro 149 thousand).

Due to retirements of financial instruments, the loss allowances recognised for trade receivables changed by Euro 4,479 thousand in the 2023 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 allowances (general approach) at 30 September 2023

	12-month expected credit loss	Lifetime expected credit loss		Total
Euro 000s	Level 1	Level 2	Level 3	
Balance at 1 October 2022	12,923	–	374	13,297
Additions	2,719	–	16	2,735
Reversals	– 328	–	– 2	– 330
Retirements	– 1,010	–	– 3	– 1,013
Reclassifications	–	–	–	–
Other	–	–	–	–
Balance at 30 September 2023	**14,304**	**–**	**385**	**14,689**

Loss allowances (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 October 2021	10,732	–	384	11,116
Additions	2,232	–	–	2,232
Reversals	– 33	–	– 10	– 43
Retirements	– 8	–	–	– 8
Reclassifications	–	–	–	–
Other	–	–	–	–
Balance at 30 September 2022	**12,923**	**–**	**374**	**13,297**

Of the loss allowances presented above, Euro 12,159 thousand relate to loans (previous year: Euro 11,209 thousand) and Euro 2,530 thousand to other financial assets (previous year: Euro 2,088 thousand).

The breakdown of default risk by risk class is presented in the following overview:

Default risk (general approach) at 30 September 2023

Euro 000s	12-month expected credit loss	Lifetime expected credit loss		Total
	Level 1	Level 2	Level 3	
Extremely secure contract partners	14,312	–	–	14,312
Secure contract partners	25,650	–	883	26,533
Acceptable contract partners	5,339	–	–	5,339
Speculative contract partners	–	–	–	–
Balance at 30 September 2023	**45,301**	**–**	**883**	**46,184**

Default risk (general approach) at 30 September 2022

Euro 000s	12-month expected credit loss	Lifetime expected credit loss		Total
	Level 1	Level 2	Level 3	
Extremely secure contract partners	13,665	–	–	13,665
Secure contract partners	18,140	–	875	19,015
Acceptable contract partners	5,012	–	–	5,012
Speculative contract partners	–	–	–	–
Balance at 30 September 2022	**36,817**	**–**	**875**	**37,692**

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 2023.

Further information about financial debt, its maturities and committed credit lines can be found in Note 34 Financial Debt.

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 3,989 thousand (previous year: Euro 9,521 thousand) and interests in subsidiaries amounting to Euro 2 thousand (previous year: Euro 5,865 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 2023			30 September 2022	
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	279,414	627,341	888,055	190,734	780,175	941,442
Lease liabilities	17,947	58,072	87,085	16,211	49,115	91,133
Trade payables	471,570	968	1,727	507,217	952	1,877
Other financial debt	5,881	16,708	19,286	7,008	17,223	19,838
Other financial liabilities	263,332	5,595	19,956	1,558,728	7,521	19,601
Derivative financial liabilities	2,950,467	487,807	–	13,177,212	3,425,217	–
	3,988,611	**1,196,491**	**1,016,109**	**15,457,110**	**4,280,203**	**1,073,891**

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 ensuring that a comprehensive hedging strategy is implemented and that risk positions are closed.

Interest rate risks: 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 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 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 for which interest rate risk could impact on equity or annual earnings.

Interest rate risks

Euro 000s		30 Sep 2023	30 Sep 2022
Increase in interest rates by + 175 basis points (previous year: + 75 basis points)			
of which interest derivatives within hedge accounting	Equity	14,963	5,801
Reduction in interest rates – 175 basis points (previous year: – 75 basis points)			
of which interest derivatives within hedge accounting	Equity	– 16,464	– 5,930

The aforementioned measures mean that any interest rate risks arising are largely 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 services 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 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 currency risks to which MVV is exposed mainly relate to British pounds (GBP) and US dollars (USD). When calculating the currency sensitivity, the variance on which the sensitivity is to be based is adequately stated by reference to an annual analysis of the average variance in exchange rates.

The table below presents an analysis of the impact of exchange rate movements on annual earnings. In this, it is assumed that all other parameters (such as interest rates) remain unchanged. The analysis accounts for financial instruments whose currency risk might impact on equity and annual earnings as shown below.

These particularly involve loans, trade receivables, liabilities to banks, trade payables, currency derivatives within hedge accounting and currency derivatives outside hedge accounting that are denominated in foreign currencies.

Currency risks

Euro 000s		**30 Sep 2023**	30 Sep 2022
Appreciation			
in Euro compared with all currencies	Annual earnings appreciation (previous year: appreciation)	23,736	– 5,389
of which Euro/GBP	Annual earnings + 5 % (previous year: + 6 %)	– 8,791	– 7,669
of which Euro/USD	Annual earnings + 9 % (previous year: + 7 %)	7,545	1,195
Depreciation			
in Euro compared with all currencies	Annual earnings appreciation (previous year: appreciation)	1,136	7,528
of which Euro/GBP	Annual earnings – 5 % (previous year: – 6 %)	9,717	9,012
of which Euro/USD	Annual earnings – 9 % (previous year: – 7 %)	– 7,701	– 289

Commodity price risks: In the context of 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 for electricity, gas, coal and CO_2 rights 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 mainly involve energy trading transactions recognised as derivatives in accordance with IFRS 9.

Typical volatilities based on historic changes in market prices for the respective subsequent supply year were determined and rounded up or down as appropriate for all commodities. These volatilities state the percentage of fluctuation to which the market prices as of the valuation date are then subjected. For all commodities, the resultant changes in market prices were multiplied with the respective sensitivities and aggregated for each commodity.

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.

The price risks presented in the table below serve to meet IFRS 7 disclosure requirements and do not reflect MVV's actual economic risks.

Price risks

Euro 000s		**30 Sep 2023**	30 Sep 2022
Appreciation			
Electricity			
	Annual earnings + 40 % (previous year: + 45 %)	35,738	– 765,676
	Equity + 40 % (previous year: + 45 %)	11,312	126,666
Gas			
	Annual earnings + 50 % (previous year: + 55 %)	9,627	756,930
	Equity + 50 % (previous year: + 55 %)	105,483	556,052
Coal			
	Annual earnings + 50 % (previous year: + 55 %)	60,428	260,139
CO_2			
	Annual earnings + 30 % (previous year: + 40 %)	588	532
	Equity + 30 % (previous year: + 40 %)	107,127	182,748
Depreciation			
Electricity			
	Annual earnings + 40 % (previous year: + 45 %)	– 29,938	– 442,911
	Equity + 40 % (previous year: + 45 %)	– 10,594	– 71,567
Gas			
	Annual earnings + 50 % (previous year: + 55 %)	– 9,314	– 757,968
	Equity + 50 % (previous year: + 55 %)	– 104,039	– 510,386
Coal			
	Annual earnings + 50 % (previous year: + 55 %)	– 59,819	– 266,361
CO_2			
	Annual earnings + 30 % (previous year: + 40 %)	– 541	– 532
	Equity + 30 % (previous year: + 40 %)	– 107,026	– 182,748

The aforementioned reduction and management measures mean that commodity price risks are largely hedged and that 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 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 recognised under IFRS 9 are presented in the following table:

Nominal volumes by maturity

	30 September 2023			30 September 2022		
Euro 000s	**< 1 year**	**1 – 5 years**	**> 5 years**	< 1 year	1 – 5 years	> 5 years
Interest derivatives	145,500	110,672	192,896	21,496	151,464	250,667
Commodity derivatives	19,192,109	6,840,989	2,634	15,872,808	5,608,535	4,084
Currency derivatives	98,933	16,381	–	83,927	85,767	–
	19,436,542	**6,968,042**	**195,530**	**15,978,231**	**5,845,766**	**254,751**

The commodity derivatives recognised under IFRS 9 can be broken down as follows:

Commodity derivatives

	30 September 2023			30 September 2022		
Euro 000s	**Nominal volumes**	**Fair values of assets**	**Fair values of liabilities**	Nominal volumes	Fair values of assets	Fair values of liabilities
Commodity derivatives						
Electricity	16,220,188	2,488,734	2,271,530	13,576,246	13,178,855	13,382,204
Coal	131,806	11,432	48,218	364,084	267,497	21,800
Gas	5,868,949	778,678	951,358	4,338,897	3,523,973	2,878,792
CO_2 rights	3,808,874	210,836	162,305	3,203,379	393,082	314,189
Other	5,915	2,923	1,372	2,821	142	1,725
	26,035,732	**3,492,603**	**3,434,783**	**21,485,427**	**17,363,549**	**16,598,710**
Commodity derivatives						
Futures	25,991,136	3,475,928	3,417,300	21,232,115	17,096,052	16,576,910
Swaps	29,343	11,086	17,483	253,312	267,497	21,800
Other	15,253	5,589	–	–	–	–
	26,035,732	**3,492,603**	**3,434,783**	**21,485,427**	**17,363,549**	**16,598,710**

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 ("own use contracts").

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 2023

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	10,926,773	2,925,295	8,203,416	2,533,005	2,723,357	392,290
AAA and Aaa to AA– and Aa3	822,411	151,570	281,440	93,469	540,971	58,101
A+ and A1 to A– and A3	372,215	58,204	314,521	45,147	57,694	13,057
BBB+ and Baa1 to BBB– and Baa3	193,891	75,546	123,641	60,414	70,250	15,132
BB+ and Ba1 to BB– and Ba3	17,751	7,689	13,625	7,183	4,126	506
	12,333,041	**3,218,304**	**8,936,643**	**2,739,218**	**3,396,398**	**479,086**

1 By analogy with rating categories at Standard & Poor's and/or Moody's

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

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 10 years as of 30 September 2023 (previous year: up to 11 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.

MVV has concluded hedging transactions with average interest rates of 0.90 % to 4.60 % to hedge against interest rate risks in its financing activities. The average hedged prices for commodity price risks range from Euro 137.93 to Euro 152.20 for electricity, from Euro 36.59 to Euro 58.03 for gas and from Euro 62.54 to Euro 77.52 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 2023

	Carrying amount of hedging instrument		Nominal volume	Changes in fair value of hedging instrument (basis for determining hedge ineffectiveness)	Changes in fair value of hedged item (basis for determining ineffectiveness)
Euro 000s	Asset-side derivative financial instruments	Liability-side derivative financial instruments			
Commodity price risk	844,623	921,301	5,170,966	– 995,501	995,501
Interest rate risk	41,104	–	449,067	– 3,021	7,841
	885,727	**921,301**	**5,620,033**	**– 998,522**	**1,003,342**

Hedging relationships involving cash flow hedges at 30 September 2022

	Carrying amount of hedging instrument		Nominal volume	Changes in fair value of hedging instrument (basis for determining hedge ineffectiveness)	Changes in fair value of hedged item (basis for determining ineffectiveness)
Euro 000s	Asset-side derivative financial instruments	Liability-side derivative financial instruments			
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**

Cash flow hedges have the following impact on MVV's statement of comprehensive income:

Impact of cash flow hedges on total comprehensive income at 30 September 2023

Euro 000s	**Hedging gains (+)/ losses (–) recognised in OCI**	**Ineffective-ness recognised through profit or loss**	Reclassi-fication through profit or loss
Commodity price risk	– 995,501	–	– 37,798
Interest rate risk	– 3,021	–	10,994
	– 998,522	**–**	**– 26,804**

Impact of cash flow hedges on total comprehensive income at 30 September 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**

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 –28,746 thousand and Euro – 73,497 thousand were reclassified through profit or loss and recognised under sales and cost of materials respectively in the 2023 financial year (previous year: Euro 3,298,425 thousand and Euro 2,803,441 thousand respectively). For interest hedges, an amount of Euro – 10,482 thousand was reclassified through profit or loss and recognised under financing expenses (previous year: Euro 7,333 thousand). Due to deconsolidation measures, commodity hedges of Euro – 6,953 thousand and interest hedges of Euro – 512 thousand were reclassified through profit or loss. The reclassifications credited or charged from equity 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 2023**	FY 2022
Balance at 1 October [1]	936,240	– 121,167
Unrealised change in reserve for hedging costs		
Interest rate hedges	317	231
Unrealised change in cash flow hedge reserve		
Commodity hedges	– 995,501	491,034
Interest rate hedges	– 3,021	63,825
Reclassification through profit or loss		
Commodity hedges	37,798	494,984
Interest rate hedges	– 10,994	7,333
Balance at 30 September	**– 35,161**	**936,240**

1 Balance at 1 October 2021 adjusted

Fair value hedges serve to hedge risks relating to changes in fair value. At MVV, fair value hedges include foreign-currency payments with hedged items of Euro 247,130 thousand. The hedging instruments deployed involve bank liabilities in British pounds and forward exchange transactions. Furthermore, fair value hedges are deployed to hedge the future electricity price risk at proprietary generation plants and to hedge future gas price risks for stored gas. The hedging instrument deployed involves energy trading contracts.

At 30 September 2023, existing hedged items were included in fair value hedges with terms of up to 9 years (previous year: up to 10 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 2023

Euro 000s	Carrying amount of hedging instrument: Asset-side derivative financial instruments	Carrying amount of hedging instrument: Liability-side derivative financial instruments	Carrying amount of hedging instrument: Financial debt	Nominal volume	Changes in fair value of hedging instrument (basis for determining hedge ineffectiveness)	Changes in fair value of hedged item (basis for determining ineffectiveness)
Currency risk	–	2,187	148,004	247,130	– 4,819	4,841
Commodity price risk	14,130	2,580	–	38,405	27,607	– 23,386
	14,130	**4,767**	**148,004**	**285,535**	**22,788**	**– 18,545**

Hedging relationships involving fair value hedges at 30 September 2022

Euro 000s	Carrying amount of hedging instrument: Asset-side derivative financial instruments	Carrying amount of hedging instrument: Liability-side derivative financial instruments	Carrying amount of hedging instrument: Financial debt	Nominal volume	Changes in fair value of hedging instrument (basis for determining hedge ineffectiveness)	Changes in fair value of hedged item (basis for determining ineffectiveness)
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**

Fair value hedges have the following impact on MVV's statement of comprehensive income:

Impact of fair value hedges on total comprehensive income at 30 September 2023

Euro 000s	Ineffectiveness recognised through profit or loss
Currency risk	22
Commodity price risk	4,221
	4,243

Impact of fair value hedges on total comprehensive income at 30 September 2022

Euro 000s	Ineffectiveness recognised through profit or loss
Currency risk	62
Commodity price risk	– 3,972
	– 3,910

In the 2023 financial year, income from the ineffectiveness of currency hedges was recognised under financing income. The ineffectiveness resulted from slightly different nominal volumes of intragroup loans.

In the 2023 financial year, the ineffectiveness for commodities was recognised under income from derivative financial instruments.

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 %. At 30 September 2023, its adjusted equity ratio stood at 39.7 % (previous year: 27.1 %). Due to the growth in total assets resulting from exceptionally high inflows of security deposits for counterparty default risk (margins), the equity ratio fell short of the target in the previous year. This was caused by highly volatile fair values of energy trading derivatives traded on the exchanges. Excluding margins, the adjusted equity ratio amounted to 40.7 % at 30 September 2023 (previous year: 34.3 %).

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). MVV intends to generate a positive value spread. In the financial year under report, the value spread amounted to 25.5 % (previous year: 9.6 %) and resulted from the adjusted ROCE of 33.5% (previous year: 16.2 %) less WACC before taxes of 8.0 % (previous year: 6.6 %). The rise in the ROCE was chiefly driven by the increase in adjusted EBIT by Euro 527 million to Euro 880 million and the increase in capital employed by Euro 451 million to Euro 2,629 million. The target of generating a positive value spread was met in the financial year under report.

The objective of capital management thus particularly involves raising the value spread with measures including optimising the cost of capital. This is achieved on the one hand by optimising capital employed, for example by optimising working capital. On the other hand, the capital structure and, associated with this, the capital cost rate, are designed in such a way as to optimise costs and risks, for example by maintaining the appropriate level of adjusted equity ratio referred to above and by aligning liquidity to operating requirements.

There were no changes in the underlying capital management requirements compared with the previous year.

42. Segment reporting

Segment report from 1 October 2022 to 30 September 2023

Euro 000s	Adjusted external sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation and amortisation	Impairment losses
Customer Solutions	6,312,829	637,170	18,273	–
New Energies	750,111	260,933	94,321	–
Supply Reliability	404,744	1,178,194	76,880	–
Strategic Investments	61,931	2,793	3,423	–
Other Activities	905	44,031	13,981	–
Consolidation	–	– 2,123,121		–
	7,530,520	**–**	**206,878**	**–**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Contribution from period income at companies recognised at equity	Investments
Customer Solutions	– 12,911	497,467	202	29,322
New Energies	– 4,530	176,358	4,348	133,302
Supply Reliability	4,298	58,060	5,556	159,494
Strategic Investments	2,684	153,769	68,948	3,895
Other Activities	2,486	– 5,497	374	17,841
Consolidation	–	–	–	–
	– 7,973	**880,157**	**79,428**	**343,854**

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	Contribution from period income at 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**

External reporting is based on the internal management structure, thus complying with the management approach pursuant to IFRS 8. Units are grouped 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 fields 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, and 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 comprises the Köthen Energie subgroup, the MVV Energie CZ subgroup through to the date of its deconsolidation and the at-equity results of select shareholdings in municipal utility companies.

- The **Other Activities** reporting segment consists in particular of the shared-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. Furthermore, additions to unfinished products in connection with finance leases are accounted for as investments. However, additions to securities and loans are not included in this concept of investments.

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 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022	+/– change
EBIT as per income statement	1,063,070	34,454	+ 1,028,616
Measurement and realisation effects for derivatives	– 185,867	315,329	– 501,196
Interest income from finance leases	2,954	3,368	– 414
Adjusted EBIT	**880,157**	**353,151**	**+ 527,006**

Reconciliation of external sales excluding energy taxes with adjusted external sales excluding energy taxes

Euro 000s	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022	+/– change
Sales after electricity and natural gas taxes	6,619,048	5,923,588	+ 695,460
Realisation effects for derivatives	911,472	– 1,724,091	+ 2,635,563
Adjusted sales after electricity and natural gas taxes	**7,530,520**	**4,199,497**	**+ 3,331,023**

Of adjusted segment sales with external customers, 95.2 % were generated in Germany (previous year: 92.6 %). 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.

Of non-current assets, which comprise intangible assets, property, plant and equipment, right-of-use assets, investment properties, shareholdings in companies recognised at equity and other non-financial receivables and assets, Euro 3,147,320 thousand are located in Germany (previous year: Euro 3,073,377 thousand) and Euro 403,159 thousand in third countries (previous year: Euro 551,943 thousand). This breakdown is based on the geographical locations of the respective assets.

43. 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.

The cash flow before working capital and taxes increased year-on-year by Euro 422 million. This development was chiefly due to the fact that, also after elimination of non-cash-effective and non-operating income and expenses, the significant year-on-year growth in earnings before taxes (EBT) led to a higher volume of cash-effective operating earnings. The largest item in this elimination related to the non-cash-effective measurement of derivatives pursuant to IFRS 9. The reclassification to the cash flow from investing activities of non-operating income generated from the sales of the MVV Energie CZ Group and the shares in Stadtwerke Ingolstadt also impacted negatively on the cash flow before working capital.

The cash flow from operating activities fell year-on-year by Euro 1,566 million. This resulted above all from higher repayments of security deposits for counterparty default risk (margins). Largely on account of lower wholesale prices for electricity and gas, the period under report saw a significant reduction in the volume of margins received. This more than offset the significant improvement in the operating cash flow. Adjusted to exclude the change in margins deposited, the cash flow from operating activities increased by Euro 430 million to Euro 786 million and was thus consistent with the strong operating earnings performance. Alongside higher earnings, the main factor influencing the year-on-year development in the cash flow from an operating perspective was the reduction in the volume of receivables and inventories.

The development in the cash flow from investing activities was chiefly shaped by proceeds from the sales of the MVV Energie CZ Group and of the shares in Stadtwerke Ingolstadt in the period under report. Moreover, the volume of outgoing payments to acquire companies was lower in the current period. These factors were countered by higher payments for investments in non-current assets. Overall, the cash flow from investing activities rose year-on-year by Euro 195 million.

The cash flow from financing activities fell by Euro 167 million to Euro – 285 million, a development mainly resulting from a lower volume of net new borrowing.

MVV reported cash and cash equivalents of Euro 975 million at 30 September 2023 (30 September 2022: Euro 1,885 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 2022	Cash-effective changes			Non-cash-effective changes				30 Sep 2023
		Amount taken up	Principal repayment	Interest payments [1]	Change in scope of consolidation	Changes in exchange rates	Additions to leases	Other adjustments	
Liabilities to banks	1,744,123	22,865	– 137,739	– 53,735	– 5,968	6,849	–	–	1,630,130
Lease liabilities	140,211	–	– 16,294	– 3,885	– 4,713	21	19,677	– 2,132	136,770
Other financial debt	32,601	3,800	– 2,759	– 1,312	– 2,582	9	–	–	31,069
	1,916,935	**26,665**	**– 156,792**	**– 58,932**	**– 13,263**	**6,879**	**19,677**	**– 2,132**	**1,797,969**

1 Interest payments do not form part of the closing balance for liabilities in connection with financing activities.

Liabilities in connection with financing activities

Euro 000s	30 Sep 2021	Cash-effective changes			Non-cash-effective changes				30 Sep 2022
		Amount taken up	Principal repayment	Interest payments [1]	Change in scope of consolidation	Changes in exchange rates	Additions to leases	Other adjustments	
Liabilities to banks	1,711,036	289,965	– 246,392	– 53,458	– 3,390	– 7,096	–	–	1,744,123
Lease liabilities	148,601	–	– 15,805	– 3,986	– 9,872	– 5	17,520	– 228	140,211
Other financial debt	26,639	31,826	– 25,866	– 1,371	–	2	–	–	32,601
	1,886,276	**321,791**	**– 288,063**	**– 58,815**	**– 13,262**	**– 7,099**	**17,520**	**– 228**	**1,916,935**

1 Interest payments do not form part of the closing balance for liabilities in connection with financing activities.

44. 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, associates and joint ventures 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 (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 18,284 thousand (previous year: Euro 19,893 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 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022	**1 Oct 2022 to 30 Sep 2023**	1 Oct 2021 to 30 Sep 2022	**30 Sep 2023**	30 Sep 2022	**30 Sep 2023**	30 Sep 2022
Stadt Mannheim	6,722	9,843	21,588	24,037	608	507	6,257	7,786
Abfallwirtschaft Mannheim	13,651	11,649	2,068	1,722	1,436	1,562	6,572	6,061
GBG Mannheimer Wohnungsbaugesellschaft mbH	13,055	14,587	20	243	807	593	783	40
m:con - mannheim:congress GmbH	4,375	4,027	331	212	4,138	4,660	370	265
MKB Mannheimer Kommunalbeteiligungen GmbH	31	8	–	–	–	–	–	–
MV Mannheimer Verkehr GmbH	739	7	8	19	47	–	8	–
Rhein-Neckar-Verkehr GmbH	7,390	7,049	407	–	1,747	209	727	1,186
Stadtentwässerung Mannheim	972	1,489	337	336	149	56	37	15
Associates	12,933	6,207	1,372	1,281	1,223	927	302	1,628
Joint ventures	236,967	200,928	344,598	441,602	9,469	69,526	7,125	15,757
Other related parties	25,255	25,627	9,419	8,594	8,499	6,634	4,294	2,554
	322,090	**281,421**	**380,148**	**478,046**	**28,123**	**84,674**	**26,475**	**35,292**

The income and expenses with other related parties include income of Euro 13 thousand (previous year: Euro 43 thousand) and expenses of Euro 599 thousand (previous year: Euro 336 thousand) for goods and services provided to management staff performing key functions. At the balance sheet date, the company had outstanding obligations of Euro 69 thousand due to Supervisory Board members for their activity on the board (previous year: Euro 100 thousand).

Pursuant to IAS 24, related parties include management staff performing key functions and their close family relatives. Management staff performing key functions 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 2023. As in the previous year, the company also did not issue any guarantees on behalf of Executive or Supervisory Board members. In addition to their supervisory board remuneration, the employee representatives on the Supervisory Board receive salaries customary to the market.

MVV Energie AG has compiled a dependent company report in accordance with § 312 AktG for the financial year ending on 30 September 2023. 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 5,177 thousand in the year under report (previous year: Euro 5,868 thousand). Of this total, Euro 4,432 thousand related to short-term benefits (previous year: Euro 4,076 thousand), while Euro 745 thousand involved post-employment benefits (previous year: Euro 1,792 thousand).

In the year under report, the Executive Board received short-term benefits of Euro 3,890 thousand (previous year: Euro 3,510 thousand). Short-term benefits include fixed remuneration of Euro 1,566 thousand (previous year: Euro 1,727 thousand), fringe benefits of Euro 116 thousand (previous year: Euro 141 thousand) and other remuneration, which includes remuneration paid for board positions held at subsidiaries and shareholdings and is nevertheless imputed to the variable remuneration of Executive Board members, of Euro 34 thousand (Euro 36 thousand), as well as performance-related remuneration totalling Euro 2,174 thousand (previous year: Euro 1,606 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 each year. No more far-reaching long-term remuneration targets have been agreed. There are no share-based remuneration agreements or comparable instruments. Provisions of Euro 2,207 thousand were stated for bonus-related obligations as of 30 September 2023 (previous year: Euro 1,721 thousand).

Pension provisions of Euro 8,577 thousand were recognised as of 30 September 2023 for the members of the Executive Board (previous year: Euro 8,097 thousand). The service cost for post-employment benefits amounts to Euro 745 thousand (previous year: Euro 1,702 thousand).

Active Supervisory Board members were remunerated as follows:

Supervisory Board remuneration

Euro 000s	**FY 2023**	FY 2022
Fixed remuneration (including meeting allowances)	542	566

Former members of the Executive Board received benefits of Euro 820 thousand in the year under report (previous year: Euro 755 thousand). Provisions totalling Euro 13,101 thousand have been stated for pension obligations towards former Executive Board members (previous year: Euro 13,076 thousand). A total of Euro 366 thousand was allocated to this item in the year under report (previous year: Euro 161 thousand).

45. MVV's shareholdings

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital % [1]	Footnotes
Fully consolidated subsidiaries				
Associates (Germany)				
beegy GmbH	Schwalbach am Taunus	Germany	100.00	4
BEG Gernsbacher Höhe UG (haftungsbeschränkt) & Co. KG	Mainz	Germany	0.00	5a, 8
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 Products GmbH (previously: RZ Products Gmbh)	Wallmenroth	Germany	100.00	
DC-Datacenter-Assets GmbH (previously: MVV Energiedienstleistungen Alpha zwei GmbH)	Mannheim	Germany	100.00	7
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	5b
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
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	56.03	
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 UW GmbH	Wörrstadt	Germany	100.00	4, 7
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	5a
juwi Wind Germany 221 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 223 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 230 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 247 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany Verwaltungs GmbH	Wörrstadt	Germany	100.00	
Köthen Energie GmbH	Köthen (Anhalt)	Germany	100.00	
MVV Alpha drei GmbH	Mannheim	Germany	100.00	4
MVV Alpha eins GmbH	Mannheim	Germany	100.00	
MVV Alpha fünfzehn GmbH	Mannheim	Germany	100.00	4
MVV Biogas GmbH	Mannheim	Germany	100.00	
MVV Biomethan GmbH	Mannheim (dom.: Wanzleben-Börde)	Germany	100.00	4
MVV Enamic GmbH	Mannheim	Germany	100.00	4
MVV Enamic Korbach GmbH	Korbach	Germany	100.00	4

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital % [1]	Footnotes
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	
DecarTec GmbH (previously: Philipp Rass Energy GmbH)	Trier	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	
Fully consolidated subsidiaries				
Associates (international)				
AVANTAG Energy S.à.r.l.	Wecker	Luxembourg	100.00	
Cactus Garden Solar LLC	Delaware	USA	100.00	
Corsoleil EURL i.L.	Saint Florent	France	100.00	
Electaparc S.A.	Montevideo	Uruguay	100.00	
GEMdev S.r.l.	Milan	Italy	70.00	7
JSI 01 Srl	Milan	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 Energie Rinnovabili Srl	Milan	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	

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital %[1]	Footnotes
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	74.40	
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	5b
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 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	
MVV Environment Services Limited	Plymouth	UK	100.00	
Rocky Mountain Solar LLC	Delaware	USA	100.00	
Unconsolidated other shareholdings[9]				
Associates (Germany)				
Blue Village FRANKLIN Mobil GmbH	Mannheim	Germany	100.00	
EVO Vertrieb GmbH	Offenbach am Main	Germany	100.00	
JUWI Deutschland Verwaltungs GmbH (previously: Windwärts Projektmanagement GmbH)	Wörrstadt	Germany	100.00	
juwi Reinstedt Verwaltungs GmbH	Wörrstadt	Germany	100.00	7
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 200 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 204 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 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 228 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 232 GmbH & Co. KG	Wörrstadt	Germany	70.00	
juwi Wind Germany 234 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 235 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 236 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 237 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 238 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 239 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 242 GmbH & Co. KG	Wörrstadt	Germany	100.00	7

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital % [1]	Footnotes
juwi Wind Germany 243 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 244 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 245 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 246 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 248 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 249 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 250 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 251 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 252 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 253 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 254 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 255 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 256 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 257 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 258 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 259 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 260 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 261 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 262 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 263 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 264 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 265 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 266 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 267 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 268 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 269 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 270 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 271 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 272 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 273 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 274 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 275 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
juwi Wind Germany 276 GmbH & Co. KG	Wörrstadt	Germany	100.00	7
luminatis Deutschland GmbH	Landau in der Pfalz	Germany	100.00	
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	
Windwärts Betriebs- und Beteiligungsgesellschaft mbH	Hanover	Germany	100.00	
Unconsolidated other shareholdings[9]				
Associates (international)				
Achab Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Adobe Creek Solar LLC	Delaware	USA	100.00	7
Alachua Solar LLC	Delaware	USA	100.00	

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital %[1]	Footnotes
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	
Boxelder Creek Solar LLC	Delaware	USA	100.00	
Cache Valley Solar LLC	Delaware	USA	100.00	
Chapeno Solar LLC	Delaware	USA	100.00	
Chino Valley Solar LLC	Delaware	USA	100.00	
Coalbank Creek Solar LLC	Delaware	USA	100.00	
Coyote Gulch Solar LLC	Delaware	USA	100.00	
Coyote Spring Solar LLC	Delaware	USA	100.00	7
Crystal Springs Solar LLC	Delaware	USA	100.00	
Delareyville Solar Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Dolores Canyon Solar LLC	Delaware	USA	100.00	
Dove Springs Solar LLC	Delaware	USA	100.00	7
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	
Highland Spring Solar LLC	Delaware	USA	100.00	7
Hotazel Solar Farm 1 (Pty) Ltd.	Cape Town	South Africa	100.00	
Hotazel Solar Farm 2 (Pty) Ltd.	Cape Town	South Africa	100.00	
Iron Spring Solar LLC	Delaware	USA	100.00	7
JSI Procurement Group LLC	Delaware	USA	100.00	
JUWI Construction ZA	Cape Town	South Africa	100.00	7
juwi Devco Pty. Ltd.	Brisbane	Australia	100.00	
juwi Development 01 Srl	Milan	Italy	100.00	
juwi Development 04 Srl	Milan	Italy	100.00	
juwi Development 06 Srl	Milan	Italy	100.00	
juwi Development 07 Srl	Milan	Italy	100.00	
juwi Development 09 Srl	Milan	Italy	100.00	
juwi Development 10 Srl	Milan	Italy	100.00	
juwi Development 11 Srl	Milan	Italy	100.00	
juwi Development 14 Srl	Verona	Italy	100.00	
juwi Development 15 Srl	Verona	Italy	100.00	7
juwi Development 16 Srl	Milan	Italy	100.00	7
juwi Development 17 Srl	Milan	Italy	100.00	7
juwi Development 18 Srl	Milan	Italy	100.00	7
juwi Development 19 Srl	Milan	Italy	100.00	7
juwi Development 20 Srl	Milan	Italy	100.00	7
juwi Development 21 Srl	Milan	Italy	100.00	7
juwi Development 22 Srl	Milan	Italy	100.00	7
juwi Development 23 Srl	Milan	Italy	100.00	7
juwi Development 24 Srl	Milan	Italy	100.00	7
juwi Development 25 Srl	Milan	Italy	100.00	7
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	5b
Kaip Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Kap Vley Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital % [1]	Footnotes
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	
Moonstone Solar LLC	Delaware	USA	100.00	7
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	
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	
Pronghorn Solar LLC	Delaware	USA	100.00	
Rifle Gap Solar LLC	Delaware	USA	100.00	
Saddle Mountain Solar LLC	Delaware	USA	100.00	
San Carlos Solar LLC	Delaware	USA	100.00	
Sierra Mojada Solar LLC CCC	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	7
Skyview Solar LLC	Delaware	USA	100.00	
Snake River Solar LLC	Delaware	USA	100.00	7
South Hills Solar LLC	Delaware	USA	100.00	7
Spanish Peaks II Solar LLC	Delaware	USA	100.00	
Spanish Peaks Solar LLC	Delaware	USA	100.00	
Trifylli Iliaki Single Member S.A.	Athens	Greece	100.00	7
Vredendal Solar Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Wildebeest Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Williams Creek Solar LLC	Delaware	USA	100.00	7
Zingesele Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
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	
AVR BioGas GmbH	Sinsheim	Germany	41.50	
BEEGY Operations GmbH i.L.	Mannheim	Germany	51.00	3
Biomasse Rhein-Main GmbH	Flörsheim am Main	Germany	33.33	

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital %[1]	Footnotes
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	
sMArt City Mannheim GmbH	Mannheim	Germany	50.00	
Solventus GmbH & CO. KG	Kiel	Germany	50.00	
Solventus Verwaltungsgesellschaft mbH	Kiel	Germany	50.00	
Stadtwerke Sinsheim Versorgungs GmbH & Co. KG	Sinsheim	Germany	30.00	
Umspannwerk Donnersberg GmbH & Co. KG	Wörrstadt	Germany	22.91	
Windpark Reinstedt Repowering GmbH & Co. KG	Wörrstadt	Germany	55.00	3, 7
Windpark Worms Repowering GmbH & Co. KG	Wörrstadt	Germany	100.00	3
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	6
Stadtwerke Buchen GmbH & Co. KG	Buchen-Odenwald	Germany	25.10	
Zweckverband Wasserversorgung Kurpfalz	Mannheim (dom.: Heidelberg)	Germany	51.00	3
At equity				
Associates (international)				
juwi Shizen Energy Operation Inc.	Tokyo	Japan	30.00	

List of MVV's shareholdings at 30 September 2023

	Town/city	Country	Share of capital %[1]	Footnotes
Other minority shareholdings				
(Germany)				
8KU GmbH	Berlin	Germany	12.50	
Infrastruktur Oberheimbach I GmbH & Co. KG	Wörrstadt	Germany	15.00	
juwi Wind Germany 129 GmbH & Co. KG	Wörrstadt	Germany	16.00	
Klimaschutzagentur Mannheim gemeinnützige GmbH	Mannheim	Germany	40.00	9
Main-Kinzig-Entsorgungs- und Verwertungs GmbH	Gelnhausen	Germany	49.00	9
Management Stadtwerke Buchen GmbH	Buchen-Odenwald	Germany	25.20	9
RIO Holzenergie GmbH & Co. Langelsheim KG	Wörrstadt	Germany	37.55	9
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	9
Stadtwerke Walldorf GmbH & Co. KG	Walldorf	Germany	25.10	9
Stadtwerke Walldorf Verwaltungs GmbH	Walldorf	Germany	25.10	9
SWT Regionale Erneuerbare Energien GmbH	Trier	Germany	51.00	9
Wasserversorgungsverband Neckargruppe	Edingen-Neckarhausen	Germany	25.00	9
WiWi Windkraft GmbH & Co. Westpfalz KG i.L.	Wörrstadt	Germany	5.32	
WVE Wasserversorgungs- und -entsorgungsgesellschaft Schriesheim mbH	Schriesheim	Germany	24.50	9

1 Share of capital at 30 September 2023 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

5a Controlling influence – general partner GmbH performs management

5b Controlling influence based on contractual provisions

6 Significant influence based on articles of association

7 Added in financial year

8 Citizens' energy company at the Group

9 Company of immaterial significance

Further disclosures can be found in the list of shareholdings of MVV Energie AG.

46. Auditor's fee

The following fees were incurred in Germany for the services performed by the auditor of the consolidated financial statements, PricewaterhouseCoopers GmbH Wirtschaftsprüfungs-gesellschaft, in the 2023 financial year:

Auditor's fee

Euro 000s	FY 2023	FY 2022
Audit services	2,399	2,270
Other audit services	684	420
Tax advisory services	–	94
Other services	212	608
	3,295	**3,392**

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. No tax advisory services were performed in the 2023 financial year. The fees paid for other services chiefly include advisory services provided in connection with our IT projects.

47. Utilisation of § 264 (3) HGB

The following German subsidiaries will draw on the disclosure exemption provided for under § 264 (3) HGB for the 2023 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

48. Declaration of Compliance (§ 161 AktG)

The Corporate Governance Statement and Declaration of Compliance were published on our website at **mvv.de/en/corporate-governance** on 7 November 2023.

49. Information on concessions

In addition to the concession agreements between the City of Mannheim and MVV Energie AG (see Note 44 Related Party Disclosures), further concession agreements have also been concluded between MVV companies and local and regional authorities. The remaining terms range from 9 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.

50. Events after balance sheet date

We are not aware of any events after the balance sheet date.

Mannheim, 14 November 2023

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 risks associated with the expected development of the Group.”

Mannheim, 14 November 2023

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

Ralf Klöpfer
Sales

Dr. Hansjörg Roll
Technology

Supervisory Board of MVV Energie AG

Christian Specht
(Member and, since 4 August 2023, Chair) Lord High Mayor of City of Mannheim (since 4 August 2023)

Dr. Peter Kurz
(Chair until 3 August 2023) Lord High Mayor of City of Mannheim (until 3 August 2023)

Heike Kamradt-Weidner [1]
(Deputy Chair) Chair of Group Works Council

Kathrin Biro [1]
Trade Union Secretary, Managing Director of ver.di Rhine-Neckar District (since 16 October 2023)

Johannes Böttcher [1]
Work Safety Specialist at Energieversorgung Offenbach AG (until 26 October 2022)

Angelo Bonelli [1]
Trade Union Secretary at ver.di Baden-Württemberg State District

Timo Carstensen [1]
Deputy Chair of Works Council of Stadtwerke Kiel AG

Sabine U. Dietrich
Supervisory Board Member, Consultant

Detlef Falk [1]
Chair 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

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 Chair of Executive Board and CFO of HeidelbergCement AG (now Heidelberg Materials AG)

Erik Niedenthal [1]
Chair of Works Council of Energieversorgung Offenbach AG (since 27 October 2022)

Dr. Volker Proffen
Mayor of City of Mannheim (since 16 October 2023)

Tatjana Ratzel
Lawyer, Head of Department at INTER Krankenversicherung AG Mannheim

Thorsten Riehle
Managing Director of Capitol Betriebs-GmbH Mannheim

Andreas Schöniger [1]
Deputy Chair of Works Council of MVV Energie AG

Susanne Schöttke [1]
State District Director at ver.di North

Dr. Stefan Seipl
Businessman, Independent Management Consultant

Susanne Wenz [1]
Deputy State District Director at ver.di Baden-Württemberg (until 31 August 2023)

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 (Chair) • Heike Kamradt-Weidner (Deputy Chair) • Angelo Bonelli • Detlef Falk • Martin F. Hermann • Gregor Kurth
Personnel Committee	• Christian Specht (Chair since 4 August 2023) • Dr. Peter Kurz (Chair until 3 August 2023) • Heike Kamradt-Weidner (Deputy Chair) • Angelo Bonelli • Barbara Hoffmann • Gregor Kurth • Andreas Schöniger
Nomination Committee	• Christian Specht (Chair since 4 August 2023) • Dr. Peter Kurz (Chair until 3 August 2023) • Barbara Hoffmann • Gregor Kurth • Dr. Lorenz Näger • Tatjana Ratzel • Thorsten Riehle
Mediation Committee	• Christian Specht (Chair since 4 August 2023) • Dr. Peter Kurz (Chair until 3 August 2023) • Heike Kamradt-Weidner • Gregor Kurth • Andreas Schöniger
New Authorised Capital Creation Committee	• Christian Specht (Chair since 4 August 2023) • Dr. Peter Kurz (Chair until 3 August 2023) • Heike Kamradt-Weidner • Gregor Kurth • Dr. Lorenz Näger • Dr. Volker Proffen (since 16 October 2023) • Tatjana Ratzel • Thorsten Riehle • Andreas Schöniger

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 (Chair since 16 February 2023) • Grosskraftwerk Mannheim AG, Mannheim • JUWI GmbH, Wörrstadt (Chair) • Stadtwerke Kiel AG, Kiel (Chair since 20 March 2023)	• MVV Enamic GmbH, Mannheim (Deputy Chair) • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim
Verena Amann	• Energieversorgung Offenbach AG, Offenbach • JUWI GmbH, Wörrstadt • MVV Netze GmbH, Mannheim (Deputy Chair) • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt (until 23 June 2023) • Stadtwerke Kiel AG, Kiel	• MVV Enamic GmbH, Mannheim • Soluvia IT-Services GmbH, Kiel (Member since 1 October 2023, Chair since 12 October 2023)
Ralf Klöpfer	• Energieversorgung Offenbach AG, Offenbach • JUWI GmbH, Wörrstadt • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt (Deputy Chair until 23 June 2023) • Stadtwerke Kiel AG, Kiel (Member, Chair until 20 March 2023)	• MVV Enamic GmbH, Mannheim (Chair) • MVV Energie CZ a.s., Prague, Czech Republic (Chair) (until 9 December 2022) • MVV Trading GmbH, Mannheim (Chair) • Qivalo GmbH, Mannheim (Member, Chair until 7 October 2022) • Stadtmarketing Mannheim GmbH, Mannheim
Dr. Hansjörg Roll	• Energieversorgung Offenbach AG, Offenbach (Member, Chair until 16 February 2023) • Grosskraftwerk Mannheim AG, Mannheim (Chair) • JUWI GmbH, Wörrstadt (Deputy Chair) • MVV Netze GmbH, Mannheim (Chair) • Stadtwerke Kiel AG, Kiel	• MVV Energie CZ a.s., Prague, Czech Republic (until 9 December 2022) • MVV Umwelt GmbH, Mannheim (Chair)

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
Christian Specht (Member and, since 4 August 2023, Chair) Lord High Mayor of City of Mannheim (since 4 August 2023)	• GBG Unternehmensgruppe GmbH, Mannheim (Member since 4 August 2023, Chair since 13 October 2023) • Rhein-Neckar-Verkehr GmbH, Mannheim (Chair) • Universitätsklinikum Mannheim GmbH, Mannheim (Chair since 4 August 2023)	• GBG Wohnen GmbH, Mannheim (Chair since 27 October 2023) • mg: mannheimer gründungszentren gmbh, Mannheim (Chair since 4 August 2023) • MKB Mannheimer Kommunal-Beteiligungen GmbH, Mannheim (Member since 4 August 2023, Chair since 27 September 2023) • MV Verkehr GmbH, Mannheim (Chair) • MWS Projektentwicklungsgesellschaft mbH, Mannheim (Chair since 4 August 2023) • Sparkasse Rhein Neckar Nord, Mannheim (Member since 4 August 2023, Deputy Chair since 14 September 2023) • Stadtmarketing Mannheim GmbH, Mannheim (Deputy Chair since 4 August 2023) • Verkehrsverbund Rhein-Neckar GmbH (VRN), Mannheim (Chair)
Dr. Peter Kurz (Chair until 3 August 2023) Lord High Mayor of City of Mannheim (until 3 August 2023)	• Universitätsklinikum Mannheim GmbH, Mannheim (Chair until 3 August 2023)	• GBG Mannheimer Wohnungsbaugesellschaft mbH, Mannheim (Chair until 3 August 2023) • mg: mannheimer gründungszentren gmbh, Mannheim (Chair until 3 August 2023) • MKB Mannheimer Kommunalbeteiligungen GmbH, Mannheim (Chair until 3 August 2023) • MWS Projektentwicklungsgesellschaft mbH, Mannheim (Chair until 3 August 2023) • Sparkasse Rhein Neckar Nord, Mannheim (Chair until 3 August 2023) • Stadtmarketing Mannheim GmbH, Mannheim (Deputy Chair until 3 August 2023)
Heike Kamradt-Weidner (Deputy Chair) Chair of Group Works Council	• MVV Netze GmbH, Mannheim	• MVV Enamic GmbH, Mannheim • MVV Trading GmbH, Mannheim • Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel (since 7 October 2022)
Kathrin Biro Trade Union Secretary, Managing Director of ver.di Rhine-Neckar District (since 16 October 2023)		
Johannes Böttcher Works Safety Specialist at Energieversorgung Offenbach AG (until 26 October 2022)	• Energieversorgung Offenbach AG, Offenbach (Deputy Chair until 26 October 2022)	• Zusatzversorgungskasse Darmstadt, Darmstadt
Angelo Bonelli Trade Union Secretary at ver.di Baden-Württemberg State District	• TransnetBW GmbH, Stuttgart	

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Timo Carstensen Deputy Chair 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 Chair of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	• Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel
Martin F. Hermann Business Angel, Mentor		• Česká pošta, s.p., Prague, Czech Republic (Chair)
Barbara Hoffmann Auditor, Tax Advisor		• Berliner Stadtreinigungsbetriebe, Anstalt des öffentlichen Rechts, Berlin
Dr. Simon Kalvoda Head of Facility Management Division at MVV Energie AG		
Gregor Kurth Partner, Igneo Infrastructure Partners (Igneo), London, UK		• Owlcastle Holdings Limited, London, UK • Utilitas Group, Tallinn, Estonia • westconnect GmbH, Essen (since 25 November 2022)
Thoralf Lingnau Member of Works Council of MVV Energie AG		• MVV Enamic GmbH, Mannheim
Dr. Lorenz Näger Former Deputy Chair and CFO of HeidelbergCement AG (now Heidelberg Materials AG)	• PHOENIX Pharma SE, Mannheim	• Blanc & Fischer Familienholding GmbH, Oberderdingen, Germany • PHOENIX Pharmahandel GmbH & Co. KG, Mannheim, Germany • PT Indocement Tunggal Prakarsa Tbk., Jakarta, Indonesia (until 17 March 2023)
Erik Niedenthal Chair of Works Council of Energieversorgung Offenbach AG (since 27 October 2022)	• Energieversorgung Offenbach AG, Offenbach (Member, Deputy Chair since 3 November 2022)	• Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel
Dr. Volker Proffen Mayor of City of Mannheim (since 16 October 2023)		• MKB Mannheimer Kommunalbeteiligungen GmbH, Mannheim (Deputy Chair since 1 October 2023)
Tatjana Ratzel Lawyer, Head of Department at INTER Krankenversicherung AG Mannheim		
Thorsten Riehle Managing Director of Capitol Betriebs-GmbH		• mg: mannheimer gründungszentren gmbh, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Andreas Schöniger Deputy Chair of Works Council of MVV Energie AG		• MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim
Susanne Schöttke State District Director at ver.di North	• Deutsche Telekom AG, Bonn	
Dr. Stefan Seipl Businessman, Independent Management Consultant	• Ferngas Netzgesellschaft mbH, Schwaig (Chair) • Pfisterer Holding AG, Winterbach	• Nordion Energi AB, Malmö, Sweden
Susanne Wenz Deputy State District Director at ver.di Baden-Württemberg (until 31 August 2023)		• PSD Bank Karlsruhe-Neustadt eG, Karlsruhe

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 2023, the consolidated statement of comprehensive income, the consolidated income statement, the consolidated statement of changes in equity and the consolidated cash flow statement for the financial year from 1 October 2022 to 30 September 2023, as well as the notes to the consolidated financial statements, 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 2022 to 30 September 2023. 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 2023 and of its financial performance for the financial year from 1 October 2022 to 30 September 2023, 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 2022 to 30 September 2023. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our 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 € 226.2 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 impact of macroeconomic and geopolitical 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 the "Intangible assets" section of the notes to the 2023 consolidated financial statements of MVV Energie AG.

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 and Energieversorgung Offenbach AG. To this end, MVV Trading GmbH trades on the spot and futures markets, mainly for electricity, gas and emission rights on energy exchanges and the over-the-counter market. The hedging measures take due account of factors such as the expected implications of macroeconomic and geopolitical factors. 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 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 macroeconomic and geopolitical factors 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. 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 macroeconomic and geopolitical factors. 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 the "Financial instruments" section of the notes to MVV's 2023 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 disclosures marked in italics as unaudited in the "Explanation of the internal control system" and "Explanation of the risk management system" sections of the group management report

- the non-financial declaration contained in the "Combined Non-Financial Declaration" section of the group management report provided to meet the requirements of § 289b to § 289e HGB and § 315b to § 315c HGB

The other information further comprises:

- the Corporate Governance Statement pursuant to § 289f HGB and §315d HGB

- 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 (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 (i.e. manipulations of accounting and misappropriation of assets) 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 arrangements 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), and with supplementary consideration of the ISA, 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 controls.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures 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 (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 actions taken to eliminate identified threats to our independence or safeguards applied.

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_LB_ESEF_2023-09-30" (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 consolidated financial statements and the accompanying group management report for the financial year from 1 October 2022 to 30 September 2023 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 (06.2022)) 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 management requirements of the IDW Quality Management Standard: Requirements for Quality Management in the Audit Firm (IDW QMS 1 (09.2022)).

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 10 March 2023. We were engaged by the supervisory board on 4 August 2023. 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 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 submitted to the Companies Register – 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 Engagement

The German Public Auditor responsible for the engagement is Andrea Ehrenmann.

Essen, 14 November 2023

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

Ralph Welter	Andrea Ehrenmann
Wirtschaftsprüfer [German Public Auditor]	Wirtschaftsprüferin [German Public Auditor]

Other Disclosures

Contents

Five-Year Overview

Five-year overview

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Financial key figures					
Sales and earnings					
Adjusted sales excluding energy taxes (Euro million)	7,531	4,199	4,113	3,515	3,756
Adjusted EBITDA [1] (Euro million)	1,087	564	482	449	409
Adjusted EBIT [1] (Euro million)	880	353	278	233	225
Adjusted EBT [1] (Euro million)	829	322	234	181	168
Adjusted annual net income [1] (Euro million)	592	249	177	128	115
Adjusted annual net income after minority interests [1] (Euro million)	513	176	150	104	98
Capital structure					
Total assets at 30 September (Euro million)	9,553	24,328	14,810	5,031	4,822
Equity at 30 September (Euro million)	2,456	2,446	1,759	1,534	1,535
Adjusted total assets at 30 September [2] (Euro million)	6,028	6,888	5,815	4,582	4,472
Adjusted equity at 30 September [2] (Euro million)	2,391	1,836	1,662	1,571	1,544
Adjusted equity ratio [2] (%)	39.7	27.1	28.6	34.3	34.5
Net financial debt [3] (Euro million)	823	32	628	1,374	1,345
Cash flow and investments					
Cash flow from operating activities (Euro million)	– 614	952	1,203	383	238
Investments (Euro million)	344	335	306	322	310
Value performance					
ROCE [4] (%)	33.5	16.2	10.2	7.7	7.9
WACC [5] (%)	8.0	6.6	5.9	6.0	6.3
Value spread [6] (%)	25.5	9.6	4.3	1.7	1.6
Capital employed [7] (Euro million)	2,629	2,178	2,715	3,018	2,847

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 an annual average)

Five-year overview

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Share key figures					
Closing price (Xetra) at 30 September (Euro)	31.00	28.80	32.00	26.00	26.50
Market capitalisation at 30 September (Euro million)	2,043	1,898	2,109	1,714	1,747
Number of shares at 30 September (000s)	65,907	65,907	65,907	65,907	65,907
Adjusted earnings per share [1] (Euro)	7.78	2.67	2.28	1.57	1.49
Price/earnings ratio [2]	4.0	10.8	14.0	16.6	17.8
Regular dividend per share (Euro)	1.15 [6]	1.05	1.05	0.95	0.90
One-off dividend per share (Euro)	0.30 [6]	–	–	–	–
Dividend total [3] (Euro million)	75.8 [6]	69.2	69.2	62.6	59.3
Dividend total [4] (Euro million)	95.6 [6]	–	–	–	–
Payout ratio [3, 5] (%)	15 [6]	39	46	60	61
Payout ratio [4, 5] (%)	19 [6]	–	–	–	–
Dividend yield [3] (%)	3.7 [6]	3.6	3.3	3.7	3.4
Dividend yield [4] (%)	4.7 [6]	–	–	–	–

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 Basis: closing price in XETRA trading at 30 September

3 Basis: regular dividend

4 Basis: regular dividend plus one-off dividend

5 Payout ratio based on adjusted annual net income after minority interests (IFRS)

6 Subject to approval by Annual General Meeting on 8 March 2024

Five-year overview

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Non-financial key figures					
Direct CO_2 emissions (Scope 1) [1, 2] (tonnes 000s)	2,584	3.649	3,510	3,315	3,582
Indirect CO_2 emissions (Scope 2) [1, 3] (tonnes 000s)	127	147	115	219	8
Indirect CO_2 emissions (Scope 3) [1, 3] (tonnes 000s)	5,984	5,072	5,310	4,367	5,119
Electricity generation capacity from renewable energies [1] (MW_e)	633	614	564	531	491
Renewable energies as share of proprietary electricity generation [1] (%)	41	32	32	34	33
Electricity generation volumes from renewable energies [1] (kWh million)	1,398	1,295	1,217	1,274	1,154
Green heat generation capacity [1] (MW_t)	812	861	793	752	842
Green heat as share of proprietary heat generation [1, 4] (%)	46	39	36	31	29
Green heat generation volumes [1, 4] (kWh million)	2,465	2,662	2,561	1,990	1,933
Completed development of new renewable energies plants (MW_e)	1,436	476	610	262	460
Operations management for renewable energies plants (MW_e)	3,708	3,779	3,811	3,729	3,534
Number of employees at 30 September (headcount)					
MVV	6,390	6,556	6,470	6,260	6,113
of which women	1,880	1,864	1,825	1,760	1,756
of which men	4,509	4,692	4,645	4,500	4,357
of which diverse	1	–	–	–	–
of which full-time employees	5,336	5,529	5,513	5,324	5,217
of which part-time employees	1,054	1,027	957	936	896
Number of trainees at 30 September (headcount)	331	335	340	341	330
Share of female managers at 30 September (%)	19	16	14	15	15
Accident frequency rate (LTIF) [5] (number of accidents per 1,000,000 hours of work)	4.3	3.7	4.1	6.7	7.7

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 2022, 2021, 2020, 2019 and 2018 calendar years

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 2022 to 30 September 2023, 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 Combined Non-Financial Declaration.

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 Group's 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 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 2022 to 30 September 2023 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) decisions 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 2023

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Hendrik Fink ppa. Birgit Applis

Wirtschaftsprüfer
[German Public Auditor]

EU Taxonomy Tables

Sales (turnover)

FY 2023				Significant contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities (1)	Code (2)	Turnover (3)	Share of turnover in 2023 (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Biodiversity (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Circular economy (15)	Biodiversity (16)	Minimum safeguards (17)	Share of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) turnover in FY 2022 (18)	Enabling activities category (19)	Transition activities category (20)
		Euro 000s	%	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	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	CCM 4.1.	3,263	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Electricity generation from wind power	CCM 4.3.	80,368	1.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1.4	–	–
Electricity generation from hydropower	CCM 4.5.	388	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Electricity generation from bioenergy	CCM 4.8.	5,841	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.1	–	–
Transmission and distribution of electricity	CCM 4.9.	206,467	2.7	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	4.8	E	–
Storage of thermal energy	CCM 4.11.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Manufacture of biogas and biofuels for use in transport and of bioliquids	CCM 4.13.	22,637	0.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.6	–	–
Transmission and distribution networks for renewable and low-carbon gases	CCM 4.14.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
District heating/cooling distribution	CCM 4.15.	100,940	1.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2.1	–	–

Installation and operation of electric heat pumps	CCM 4.16.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Co-generation of heat/cool and power from bioenergy	CCM 4.20.	1,075	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Production of heat/cool from bioenergy	CCM 4.24.	8,912	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.2	–	–
Production of heat/cool using waste heat	CCM 4.25.	63,259	0.8	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.8	–	–
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30. [1]	35,890	0.5	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	T
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	CCM 4.31	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	T
Collection and transport of non-hazardous waste in source segregated fractions [2]	CCM 5.5.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.3	–	–
Anaerobic digestion of bio-waste	CCM 5.7.	5,566	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.1	–	–
Infrastructure enabling low-carbon road transport and public transport	CCM 6.15.	1,188	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of energy efficiency equipment	CCM 7.3.	930	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	CCM 7.4.	1,042	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	0	Y	Y	Y	Y	Y	Y	0.1	E	–
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	CCM 7.5.	1,404	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	0	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of renewable energy technologies	CCM 7.6.	410,772	5.5	Y	N/EL	N/EL	N/EL	N/EL	N/EL	0	Y	Y	Y	Y	Y	Y	6.2	E	–
Professional services related to energy performance of buildings	CCM 9.3.	4,738	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.1	E	–
Water supply [3]	WTR 2.1. [1]	50,429	0.7	N/EL	N/EL	Y	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1.2	–	–
Phosphorous recovery from waste water [4]	CE 2.1. [1]	0	0.0	N/EL	N/EL	N/EL	N/EL	Y	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
Sorting and material recovery of non-hazardous waste [4]	CE 2.7. [1]	190,681	2.5	N/EL	N/EL	N/EL	N/EL	Y	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
Treatment of hazardous waste [4]	PPC 2.2. [1]	41.730	0.6	N/EL	N/EL	N/EL	Y	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
Turnover with environmentally sustainable activities (taxonomy-aligned) (A.1)		**1,237,520**	**16.4**	**12.7**	**0.0**	**0.7**	**0.5**	**2.5**	**0.0**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**18.0**		
of which enabling activities		**626,541**	**8.3**	**8.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**11.2**	**E**	**–**
of which transition activities		**35,890**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**								**0.0**		

A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																			
				EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %										
Electricity generation from gaseous fossil fuels	CCM 4.29.	28,790	0.4	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30.	4,369	0.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	CCM 4.31.	13,770	0.2	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
Data-driven solutions for GHG emissions reductions	CCM 8.2.	5,848	0.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
Turnover with taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		**52,777**	**0.7**	**0.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**								**4.2**		
A. Turnover with taxonomy-eligible activities (A.1 + A.2)		**1,290,297**	**17.1**	**13.4**	**0.0**	**0.7**	**0.5**	**2.5**	**0.0**								**22.2**		
B. Non-taxonomy-eligible activities																			
Turnover with non-taxonomy-eligible activities (B)		**6,240,223**	**82.9**																
Total (A + B)		**7,530,520**	**100.0**																

1 Economic activities newly added in year under report

2 Economic activity 5.5. stated only for previous year due to company disposal in FY 2023

3 Due to newly adopted environmental targets, economic activity 5.1. “Construction, extension and operation of water collection, treatment and supply systems (climate change mitigation)” reported in the previous year was transferred in the year under report to economic activity 2.1. “Water supply”.

4 No figures available for previous year

Investment expenses (CapEx)

FY 2023				Significant contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities (1)	Code (2)	CapEx (3)	Share of CapEx in FY 2023 (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Biodiversity (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water (13)	Pollution (14)	Circular economy (15)	Biodiversity (16)	Minimum safeguards (17)	Share of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) CapEx in FY 2022 (18)	Enabling activities category (19)	Transition activities category (20)
		Euro 000s	%	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	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	CCM 4.1.	1,165	0.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	3.6	–	–
Electricity generation from wind power	CCM 4.3.	1,263	0.4	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2.7	–	–
Electricity generation from hydropower	CCM 4.5.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Electricity generation from bioenergy	CCM 4.8.	71	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Transmission and distribution of electricity	CCM 4.9.	59,287	17.2	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	11.9	E	–
Storage of thermal energy	CCM 4.11.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Manufacture of biogas and biofuels for use in transport and of bioliquids	CCM 4.13.	414	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.1	–	–
Transmission and distribution networks for renewable and low-carbon gases	CCM 4.14.	16,657	4.8	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	6.1	–	–
District heating/cooling distribution	CCM 4.15.	33,554	9.7	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	8.2	–	–

Installation and operation of electric heat pumps	CCM 4.16.	10,725	3.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.9	–	–
Co-generation of heat/cool from bioenergy	CCM 4.20.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Production of heat/cool from bioenergy	CCM 4.24.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Production of heat/cool using waste heat	CCM 4.25.	29,031	8.4	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	9.4	–	–
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30. [1]	7	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	T
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	CCM 4.31.	34,152	9.9	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	9.2	–	T
Collection and transport of non-hazardous waste in source segregated fractions [2]	CCM 5.5.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Anaerobic digestion of bio-waste	CCM 5.7.	2,208	0.6	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1.7	–	–
Infrastructure enabling low-carbon road transport and public transport	CCM 6.15.	3,121	0.9	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1.3	E	–
Installation, maintenance and repair of energy efficiency equipment	CCM 7.3.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	CCM 7.4.	434	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	CCM 7.5.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of renewable energy technologies	CCM 7.6.	34,354	10.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	14.4	E	–
Professional services related to energy performance of buildings	CCM 9.3.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Water supply [3]	WTR 2.1. [1]	23,146	6.7	N/EL	N/EL	Y	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	5.5	–	–
Phosphorous recovery from waste water [4]	CE 2.1. [1]	178	0.1	N/EL	N/EL	N/EL	N/EL	Y	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
Sorting and material recovery of non-hazardous waste [4]	CE 2.7. [1]	12,492	3.6	N/EL	N/EL	N/EL	N/EL	Y	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
Treatment of hazardous waste [4]	PPC 2.2. [1]	5,412	1.6	N/EL	N/EL	N/EL	Y	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
CapEx for environmentally sustainable activities (taxonomy-aligned) (A.1)		**267,671**	**77.7**	**65.7**	**0.0**	**6.7**	**1.6**	**3.7**	**0.0**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**74.9**		
of which enabling activities		**97,196**	**28.2**	**28.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**27.6**	**E**	**–**
of which transition activities		**34,159**	**9.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**								**9.2**		**–**

A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																			
				EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %										
Electricity generation from gaseous fossil fuels	CCM 4.29.	372	0.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30.	1,007	0.3	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	CCM 4.31.	1,263	0.4	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
Data-driven solutions for GHG emissions reductions	CCM 8.2.	295	0.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
CapEx for taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		**2,937**	**0.9**	**0.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**								**0.7**		
A. CapEx for taxonomy-eligible activities (A.1 + A.2)		**270,608**	**78.6**	**66.6**	**0.0**	**6.7**	**1.6**	**3.7**	**0.0**								**75.6**		
B. Non-taxonomy-eligible activities																			
CapEX for non-taxonomy-eligible activities (B)		**73,835**	**21.4**																
Total (A + B)		**344,443**	**100.0**																

1 Economic activities newly added in year under report

2 Economic activity 5.5. stated only for previous year due to company disposal in FY 2023

3 Due to newly adopted environmental targets, economic activity 5.1. “Construction, extension and operation of water collection, treatment and supply systems (climate change mitigation)” reported in the previous year was transferred in the year under report to economic activity 2.1. “Water supply”.

4 No figures available for previous year

Operating expenses (OpEx)

FY 2023				Significant contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities (1)	Code (2)	OpEx (3)	Share of OpEx in FY 2023 (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water (7)	Pollution (8)	Circular economy (9)	Biodiversity (10)	Climate change mitigation (11)	Climat chang adaptation (12)	Water (13)	Pollution (14)	Circular economy (15)	Biodiversity (16)	Minimum safeguards (17)	Share of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) OpEx in FY 2022 (18)	Enabling activities category (19)	Transition activities category (20)
		Euro 000s	%	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	Y; N; N/EL; %	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	CCM 4.1.	5	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Electricity generation from wind power	CCM 4.3.	8,993	1.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1.1	–	–
Electricity generation from hydropower	CCM 4.5.	350	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Electricity generation from bioenergy	CCM 4.8.	2,596	0.4	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.2	–	–
Transmission and distribution of electricity	CCM 4.9.	27,863	4.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	8.2	E	–
Storage of thermal energy	CCM 4.11.	29	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Manufacture of biogas and biofuels for use in transport and of bioliquids	CCM 4.13.	3,112	0.5	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.5	–	–
Transmission and distribution networks for renewable and low-carbon gases	CCM 4.14.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
District heating/cooling distribution	CCM 4.15.	11,600	1.7	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1.8	–	–

Installation and operation of electric heat pumps	CCM 4.16.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Co-generation of heat/cool and power from bioenergy	CCM 4.20.	189	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.1	–	–
Production of heat/cool from bioenergy	CCM 4.24.	3,761	0.6	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.4	–	–
Production of heat/cool using waste heat	CCM 4.25.	2,571	0.4	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2.2	–	–
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30. [1]	7,842	1.2	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	T
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	CCM 4.31.	80	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	T
Collection and transport of non-hazardous waste in source segregated fractions [2]	CCM 5.5.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	–	–
Anaerobic digestion of bio-waste	CCM 5.7.	3,444	0.5	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.3	–	–
Infrastructure enabling low-carbon road transport and public transport	CCM 6.15.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of energy efficiency equipment	CCM 7.3.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	CCM 7.4.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	CCM 7.5.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E	–
Installation, maintenance and repair of renewable energy technologies	CCM 7.6.	38,318	5.6	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	8.9	E	–
Professional services related to energy performance of buildings	CCM 9.3.	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.1	E	–
Water supply [3]	WTR 2.1. [1]	15,257	2.2	N/EL	N/EL	Y	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2.9	–	–
Phosphorous recovery from waste water [4]	CE 2.1. [1]	1	0.0	N/EL	N/EL	N/EL	N/EL	Y	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
Sorting and material recovery of non-hazardous waste [4]	CE 2.7. [1]	37,956	5.6	N/EL	N/EL	N/EL	N/EL	Y	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
Treatment of hazardous waste [4]	PPC 2.2. [1]	9,022	1.3	N/EL	N/EL	N/EL	Y	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	–	–	–
OpEx for environmentally sustainable activities (taxonomy-aligned) (A.1)		**172,989**	**25.4**	**16.3**	**0.0**	**2.2**	**1.3**	**5.6**	**0.0**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**26.6**		
of which enabling activities		**66,210**	**9.7**	**9.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**0.0**	**E**	**–**
of which transition activities		**7,922**	**1.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**								**0.0**		**–**

A.2 Taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities)																			
				EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %	EL; N/EL; %										
Electricity generation from gaseous fossil fuels	CCM 4.29.	3,338	0.5	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30.	0	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system	CCM 4.31.	964	0.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
Data-driven solutions for GHG emissions reductions	CCM 8.2.	0	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL										
OpEx for taxonomy-eligible but not environmentally sustainable activities (non-taxonomy-aligned activities) (A.2)		**4,302**	**0.6**	**0.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**								**0.7**		
A. OpEx for taxonomy-eligible activities (A.1 + A.2)		**177,291**	**26.0**	**16.9**	**0.0**	**2.2**	**1.3**	**5.6**	**0.0**								**27.3**		
B. Non-taxonomy-eligible activities																			
OpEx for non-taxonomy-eligible activities (B)		**504,352**	**74.0**																
Total (A + B)		**681,643**	**100.0**																

1 Economic activities newly added in year under report

2. Economic activity 5.5. stated only for previous year due to company disposal in FY 2023

3 Due to newly adopted environmental targets, economic activity 5.1. “Construction, extension and operation of water collection, treatment and supply systems (climate change mitigation)” reported in the previous year was transferred in the year under report to economic activity 2.1. “Water supply”.

4 No figures available for previous year

Sales (turnover)

Sales (turnover) FY 2023: 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 2023: 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 000	%	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	35,890	0.5	35,890	0.5	–	–
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**	**918,790**	**12.2**	**918,790**	**12.2**	**–**	**–**
8.	**Total applicable KPI**	**7,530,520**					

Sales (turnover) FY 2023: 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	35,890	2.9	35,890	2.9	–	–
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**	**918,790**	**74.2**	**918,790**	**74.2**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**954,680**	**77.1**	**954,680**	**77.1**	**–**	**–**

Sales (turnover) FY 2023: 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	28,790	54.6	28,790	54.6	–	–
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	4,369	8.3	4,369	8.3	–	–
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	13,770	26.1	13,770	26.1	–	–
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**	**5,848**	**11.1**	**5,848**	**11.1**	**–**	**–**
8.	**Total amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**52,777**	**100.0**	**52,777**	**100.0**	**–**	**–**

Sales (turnover) FY 2023: 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**	**6,240,223**	**100.0**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**6,240,223**	**100.0**

Investment expenses (CapEx)

Investment expenses (CapEx) FY 2023: 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 2023: 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 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 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 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 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 Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	7	0.0	7	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	34,152	9.9	34,152	9.9	–	–
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**	**192,284**	**55.8**	**192,284**	**55.8**	**–**	**–**
8.	**Total applicable KPI**	**344,443**					

Investment expenses (CapEx) FY 2023: 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	7	0.0	7	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	34,152	12.8	34,152	12.8	–	–
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**	**192,284**	**71.8**	**192,284**	**71.8**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**226,443**	**84.6**	**226,443**	**84.6**	**–**	**–**

Investment expenses (CapEx) FY 2023: 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	372	12.7	372	12.7	–	–
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	1,007	34.3	1,007	34.3	–	–
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	1,263	43.0	1,263	43.0	–	–
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**	**295**	**10.0**	**295**	**10.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**2,937**	**100.0**	**2,937**	**100.0**	**–**	**–**

Investment expenses (CapEx) FY 2023: 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**	**73,835**	**100.0**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**73,835**	**100.0**

Operating expenses (OpEx)

Operating expenses (OpEx) FY 2023: 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 2023: 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	7,842	1.2	7,842	1.2	–	–
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	80	0.0	80	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**	**102,831**	**15.1**	**102,831**	**15.1**	**–**	**–**
8.	**Total applicable KPI**	**681,643**					

Operating expenses (OpEx) FY 2023: 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	7,842	4.5	7,842	4.5	–	–
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	80	0.0	80	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**	**102,831**	**59.4**	**102,831**	**59.4**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**110,753**	**64.0**	**110,753**	**64.0**	**–**	**–**

Operating expenses (OpEx) FY 2023: 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	3,338	77.6	3,338	77.6	–	–
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	0	0.0	0	0.0	–	–
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	964	22.4	964	22.4	–	–
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**	**4,302**	**100.0**	**4,302**	**100.0**	**–**	**–**

Operating expenses (OpEx) FY 2023: 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**	**504,352**	**100.0**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**504,352**	**100.0**

Financial Calendar

14 December 2023

Annual Report
2023 Financial Year

14 December 2023

Annual Results Press Conference and Analysts’ Conference
2023 Financial Year

14 February 2024

3M Quarterly Statement
2024 Financial Year

8 March 2024

Annual General Meeting

15 May 2024

H1 Interim Report
2024 Financial Year

15 August 2024

9M Quarterly Statement
2024 Financial Year

12 December 2024

Annual Report
2024 Financial Year

12 December 2024

Annual Results Press Conference and Analysts’ Conference
2024 Financial Year

The dates of conference calls to be held with analysts during the financial year will be announced in good time.

This Annual Report was published on the internet on 14 December 2023.

MVV’s financial reports can be downloaded from our websites.

This Annual Report has been translated into English.
Only the original German version is legally binding.

Imprint/Contact

Published by

MVV Energie AG
Luisenring 49
D-68159 Mannheim

T +49 621 290 0
F +49 621 290 23 24

www.mvv.de
kontakt@mvv.de

Editorial responsibility

MVV Energie AG
Investor Relations

T +49 621 290 37 08
F +49 621 290 30 75

mvv.de/investors
ir@mvv.de

Investor Relations contact

Marc Speicher
Provisional Head of Department
Finance and Investor Relations

T +49 621 290 31 88
m.speicher@mvv.de

Graphics

HGB Hamburger Geschäftsberichte GmbH & Co. KG,
Hamburg

Photography

Alexander Grüber, Ludwigshafen

Andreas Henn, Mannheim (Page 13)

MVV Energie AG
Luisenring 49
D - 68159 Mannheim